THE KING AND QUEEN OF NEPAL VISIT MADRAS

1. Their Majesties the King and Queen of Nepal visiting the stone dressing yard of the Vivekananda Rock Memorial at Kanyakumari.

2. Sri P. Kakkan receiving the King at Madurai Air Port.

3. The King and Queen receiving the holy thirtham at Rameswaram temple.

4. At the Integral Coach Factory, Madras.

5. Witnessing the temple Jewels of Madurai Meenakshi temple.

6. At Mamallapuram.

7. The Governor of Madras presents a Tanjore plate to the King of Nepal.

No price is Too High To Pay for Freedom

CITIZEN'S DUTIES

1. To render all possible help and assistance for the defence personnel.

2. To increase the production of his factory.

3. To intensify efforts for increased production of agricultural and small-scale industrial commodities to make his State self-sufficient.

4. To avoid all strikes and lock-outs that may hamper production.

5. To maintain the price level of all essential commodities and curb the tendencies of hoarding and profiteering by conforming to the various legislative and other popular measures.

6. To maintain the supply lines of essential commodities.

7. To contribute generously in the form of money and gold for the war effort.

8. To inculcate the highest sense of duty and responsibility.

9. To join the various organizations set up for the defence of the country.

10. To prevent anti-social and anti-national activities of the fifth columnists.

11. To observe strict austerity in consumption of food, clothes and other essential goods and save for the National Defence Fund.

12. To avoid unnecessary travel so that more important and essential movement may not be hampered.

13. To keep up the morale of the people and prepare them for sacrifices.

14. To check rumour-mongering and to disseminate true and faithful news and information.

15. To join or help Citizens' Committee, N.C.C., Territorial Army and Lok Sahayak Sena and Rifle Clubs.

16. To pray for the victory of our Motherland in this struggle and set aside all differences of caste, creed or party.

MADRAS *Information*

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THIS MONTH'S COVER:

The Tamils celebrate the month of Marghazi with picturesque ceremonials in their homes and in their temples. The temple bells start peeling early in the morning awakening people to their duties. The ladies, after bath, decorate their house-fronts with rangoli and with pumpkin flowers. The family Gods are worshipped and the poems of Alwars and Nayanmars are devoutly chanted by the members of the family. The temples, where worship is carried on in strict accordance with age-old traditions are crowded with worshippers. Vaikunta Ekadasi and Arudra Dharshan are celebrated during this month. The month long festivities fittingly culminate in the four-day harvest festival of Pongal. The celebration of Pongal this year acquires additional significance by reason of it being celebrated as the Farmer's Festival.

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The results we have achieved in rural electrification are largely responsible for the present national awareness of the fact that rural electrification is not a mere programme for provision of amenities for the people of the villages but a production oriented programme of the highest priority. As against a target of 8,000 villages, it is now anticipated that the number of villages and hamlets electrified will be over 10,000, and 1·35 lakhs of pumpsets will be connected to power, thus bringing the total number of pumpsets energised to 2·53 lakhs as at the end of the Plan.

Medium irrigation

Though we have reached the limits of utilisation of our water resources, we are executing with the utmost expedition the few medium irrigation schemes for which there is still scope in our State. We are negotiating with Kerala how best the waters of the Nirar and Thekkadi rivers forming parts of the Parambikulam-Aliyar Project could be utilised, and pending agreement on this important point, the provision for Parambikulam-Aliyar Project for next year has been fixed only at Rs. 275 lakhs. With the allotment of Rs. 233 lakhs for the Chittarpattanamkal Project in next year's Plan, the work on this project should gather considerable momentum. We have also made a provision of Rs. 40 lakhs for making a start on four new schemes—Ramanadhi and Ghatana Reservoir Schemes in Tirunelveli district, Manimukthanadhi in South Arcot district and the scheme for modernisation of Vaigai channels, as soon as they obtain the technical clearance of the Planning Commission.

The programme of distribution of tractors on hire-purchase terms will also be further enlarged with provision of funds for procurement and distribution of 250 units in 1966–67, as against only 100 units in the current year. It is also proposed to make a start with distribution of power tillers. The scheme for subsidised distribution of agricultural implements now being implemented through panchayat unions will also be continued.

Panchayat Unions

In drawing up agricultural programmes and following up their implementation, the Panchayat Unions have an important part to play. Apart from schemes formulated at State level and entrusted to them for implementation, there are many small schemes which can be successfully framed by them with reference to local needs. A sum of Rs. 2 lakhs each will be made available as grants-in-aid to Panchayat Unions over the Fourth Plan Period for such local schemes having a bearing on agricultural production. We have invited the Panchayat Unions to frame the plans with the help of the technical departments concerned.

Budget at a glance

	Accounts, 1964–65.	*Budget Estimate,* 1965–66.	*Revised Estimate,* 1965–66.	*Budget Estimate,* 1966–67
(1)	(2)	(3)	(4)	(5)
	(RUPEES IN LAKHS.)			
Revenue Account				
Revenue Receipts.	1,53,88	1,63,63	1,64,91	1,88,72
Expenditure on Revenue Account.	1,51,30	1,70,60	1,72,78	1,88,41
(Revenue Deficit — or Surplus) +	+2,58	−6,96	−7,87	+31
All accounts				
Receipts—				
Opening Balance ..	1,83	40	7,35	40
Revenue Surplus ..	2,58	..	..	31
Loans from the Government of India and Autonomous Bodies	57,83	51,65	80,57	47,57
Open Market Loans.	14,33	14,00	14,44	14,00
Ways and Means Advances ..	3,10	2,20	65	..
Deposits and Remittances (Net) ..	12,78	10,01	7,59	13,69
Total ..	92,45	78,26	1,10,60	75,97
Disbursements—				
Revenue Deficit ..	..	6,97	7,87	..
Capital Expenditure	30,97	29,05	47,04	27,07
Repayment of Government of India Loans and Loans from Autonomus Bodies ..	27,00	21,46	23,28	24,13
Loans ans Advances (Net)	24,36	20,24	31,12	24,23
Repayment of Open Market Loans, etc.	2,77	14	89	14
Closing Balance ..	7,35	40	40	40
Total ..	92,45	78,26	1,10,60	75,97

In such vital programmes as distribution of improved seeds and development of local manurial resources, the interest evinced by Panchayat Unions may make all the difference between success and failure. The Panchayat Unions will also continue to be associated effectively with the formulation and execution of programmes relating to provision of amenities in rural areas.

The allotments available under community development as well as under other relevant heads of development will be pooled together and placed at the disposal

of the Panchayat Unions for utilisation according to a co-ordinated area plan. In this manner, a provision of Rs. 120 lakhs for rural water-supply programmes, of Rs. 80 lakhs for construction of link roads and of Rs. 69 lakhs for construction of buildings for elementary schools have been made in the Budget Estimates for 1966–67. Besides, a sum of Rs. 80 lakhs has been earmarked for the rural manpower programme which is designed to utilise under-employed and unemployed labour in rural areas for creation of durable community assets.

Co-operatives

By the end of the current Plan period, the membership of co-operative societies will be of the order of 42 lakhs. With this wide coverage, our efforts will now be concentrated on improving the working of the societies at the primary level. In 1966–67, about 500 potentially viable village co-operative societies will be taken up for intensive development and given assistance for employing full-time paid secretaries. Credit, short and medium term, disbursed through co-operative societies will also be stepped up from about Rs. 47 crores in 1965–66 to Rs. 52 crores in 1966–67. The concessional credit provided by the Reserve Bank of India, in recent years, has been of great help to the co-operative societies in expanding their fruitful activities. Though co-operatives in our State have also registered a measure of success in mobilising their own resources in the form of share capital, thrift fund and deposits from members and non-members, with the larger demands likely to be made on their resources under the intensive agricultural programmes, it is necessary that co-operatives should redouble their efforts to mobilise the savings of farmers in rural areas.

It is felt that the District Co-operative Central Banks could tap deposits in rural areas more vigorously, if they open more branches. We have, therefore, included in the next year's Plan a scheme for assisting District Co-operative Central Banks to open 20 branches. The main problem facing the Indian economy is one of matching savings with investment and co-operative banks have no mean part to play in garnering rural savings for purposes of productive investment. The contribution which consumer co-operatives can make in holding the price line is well recognised in our Plan. The Government of India have indicated that they would be making available a provision of nearly Rs. 45 lakhs for development of consumer's co-operative societies in urban areas next year and this assistance will be made full use of. An assistance of the order of Rs. 6 lakhs is also expected from the Government of India for modernisation of rice mills in the co-operative sector. This programme can be of great help in improving the recovery of rice from paddy.

The outlay on Animal Husbandry programmes in next year's Plan is about Rs. 105 lakhs as against an average of only Rs. 68 lakhs per annum in the Third Plan period, thus affording some evidence of the high priority attached to the programme in the Fourth Plan period. The Key Village Scheme aiming at all-round development of cattle, through promotion of scientific methods of breeding, management and disease control will continue to be the lynch-pin of our programmes in this sector. Twelve new key village blocks will be opened next year and production of pedigree breeding bulls in key-village areas will be further supplemented with the establishment of an additional Government livestock farm in 1966–67. Provision has also been made for the opening of 25 Veterinary dispensaries in pursuance of our policy of wide dispersal of facilities for veterinary aid in rural areas. Eight new poultry extension centres will be established in 1966–67 and a provision of Rs. 34 lakhs has been made for different programmes of poultry development. We also propose to set up 12 sheep and wool extension centres next year. The present tempo in the execution of dairying and milk supply programmes will also be maintained with an allocation of Rs. 77 lakhs in next year's Plan.

The programmes of development of fisheries will be considerably accelerated with the allocation of Rs. 105 lakhs in 1966–67, as against an annual average of only about Rs. 51 lakhs.

Industrial development

The industrial base of the State has been considerably strengthened in the last two Plan periods. The private sector has made a significant contribution to the development of industries in the State under a policy of active encouragement pursued by the State. The Government through the Madras Industrial Investment Corporation have pursued an active policy of extending assistance to private enterpreneurs in the form of long term loans, participation in share capital and guarantee of deferred payments for machinery. The assistance provided by the Madras Industrial Investment Corporation by way of underwriting of shares has been of special significance at a time when the capital market has been none too good.

The State Government also intend participating more directly in the establishment of industrial units in the Fourth Plan period. To this end, they have set up the Madras State Industrial Development Corporation, which, to start with, has already taken up the establishment of a continuous casting plant at Arkonam and of a cement plant of 1,200 tonnes capacity near Rajapalayam.

Among the significant achievements in the industrial sector in the current Plan period, special mention should be made of the successful completion of nine

co-operative spinning mills, with installed capacity of over 1 lakh spindles, involving a capital outlay of Rs. 6·5 crores within a remarkably short period of 18 months. Thus the co-operative spinning mills in the State will produce annually 66,000 bales of cotton yarn worth about Rs. 9 crores and will provide the essential raw material for 2 lakhs of handlooms in the co-operative sector. The four co-operative sugar mills at Ambur, Amaravathi, Padalam and Mohanur are working to their full capacity and are formulating programmes for expansion. Two more mills, one at Alanganallur and other at Kallakurichi, are at an advanced stage of erection.

Central projects

The bigger industrial projects sponsored by the Central Government in this State are also making satisfactory progress. The capital investment in Neyveli Lignite Project, the biggest such project in this State, amounted to about Rs. 140 crores as on 31st December, 1965. Nearly 5 million tonnes of lignite have been mined so far and used mostly for generation of power. The sixth unit of the second stage of Neyveli Thermal Power station was comissioned in August, 1965, raising the installed capacity to 300 mW. The entire seventh unit of 100 mW capacity is expected to be commissioned by August 1966. The briquetting and carbonisation scheme also went into production in August, 1965, and nearly 14,000 tonnes of carbonised briquettes have so far been produced. All the erection work in respect of the fertiliser plant has also been completed and the plant is likely to go into production by about the end of March 1966. The support given by Neyveli to our power grid in the current year has been of great value and has further underlined the need for further expansion of the thermal station.

The construction phase of the High Pressure Boiler Plant at Tiruchirappalli is almost nearing completion. Work has also commenced on manufacture of jigs and fixtures and the components for high pressure boilers. Programmes for expansion of the factory from the present projected boiler capacity of 720 mW to 2,000 mW during the Fourth Plan period are being formulated. The Hindusthan Teleprinters Limited has also gone into production and has taken steps for expansion of capacity. The surgical Instruments Project has commenced production in September 1965. The work on Hindusthan Photo Films factory at Ootacamund has made further progress and the plant is expected to go into production by June 1966. The Heavy Vehicles Factory, Avadi, has turned out its first "Vijayanta" tank in December, 1965, as scheduled.

One of the major industrial projects programmed for this State in the Fourth Plan period is the establishment of a Petroleum Refinery at Manali near Madras. It is expected to go on stream by the beginning of 1968. This will be followed by a fertiliser plant, the biggest of its kind in the country, with a capacity of 200,000 tonnes in terms of nitrogen per year. The technical and economic feasibility of the Neyveli-Salem Steel Plant has already been established in the detailed project report prepared by Messrs. Dastur and Company. A Survey Team of engineers sent out by the Japanese Consulting Institute in August, 1965, has made an on-the-spot study of the several aspects connected with the Neyveli-Salem Steel Project. They have made a detailed appraisal of raw materials and other facilities required for the project. The Japanese Consulting Institute Survey Team's report is expected to be finalised shortly and it is hoped that the project would be taken up soon thereafter.

Considerable production potential has been built up in the last decade and it is now up to our industrialists, scientists and technologists to explore possibilities of import substitution and thus make our economy increasingly self-reliant.

Smallscale industries

The growth of small-scale industries has also been quite encouraging in the current Plan period. The setting up of industrial estates has acted as a catalyst in promoting many small-scale industrial units in the private sector. Of the 13 new industrial estates sanctioned during the current Plan period, the industrial estate at Ambattur, with 70 units, is the biggest and the first phase of this estate has already been completed. The other industrial estates, except the one programmed at Kumbakonam, have all made a start and further construction is in progress according to a phased programme. Against the initial allocation of only Rs. 3,20 lakhs for this programme in the current Plan period, a sum of Rs. 5,01 lakhs will have been utilised by the end of the current Plan period.

The small-scale industrial units sponsored by the State Government have also made satisfactory progress. As at the end of the Third Plan period, there will be 63 such units and the production of these units in 1965-66 is estimated at Rs. 4,00 lakhs yielding a profit of Rs. 28·5 lakhs. With the setting up of the Small-scale Industries Corporation for the management of these units, we may except them to function on commercial lines and give us a reasonable return on the investment made. The programme for expansion of industrial estates will be further continued in the next year. New estates are proposed to be set up at Hosur and at three other divisional headquarters. In view of the encouraging results secured in the establishment of functional industrial estates, it is also proposed to promote an indstrial estate for the electrical goods industries at Madras in the next year's Plan.

Many small-scale industrial units are now working far below the rated capacity due to shortage of raw materials, and the situation may improve significantly only when foreign assistance is secured for maintenance imports also. Non-ferrous metals are in particular in short supply and high priority is therefore being accorded in our Plan for development of indigenous sources of supply. In this context, we attach great importance to the development of multi-metal project in Mamandur, South Arcot district, utilising the proved reserves of 1 million tonnes of ore. This programme entailing an investment of Rs. 1 crore will be taken up in stages and a provision of Rs. 5 lakhs has been made in the next year's Plan for preliminary work. We also propose to intensify the exploration of other economic minerals in the State and to this end, the State Geological Department will be suitably strengthened with personnel and equipment. A provision of Rs. 10 lakhs has been made for the expansion of the activities of the Geological Department in 1966-67.

Electricity

The pace of execution of programmes for generation and transmission of power has been well maintained in the current year, and the Plan provision in this regard of well over Rs. 25 crores will be fully utilised. The installed capacity of the Madras grid, exclusive of Neyveli, will be 1070 mWs which will exceed the initial Third Plan target of 1040 mWs.

The prolonged power cut in the current year due to unprecedentedly low storage in hydel reservoirs has once again highlighted the serious imbalance between the hydel and thermal power in our grid and the need to initiate remedial action. We have already initiated action on the setting up of a thermal station at Ennore with a capacity of 340 mWs. Work on the installation of an additional capacity of 30 mW in the Basin Bridge Thermal Station is continuing and next year's Plan incorporates a provision of Rs. 79 lakhs in this regard. Adequate provision has also been made for Anamalai Hydro-Electric Scheme and Third stage of the Kundah Hydro-Electric Scheme. The progress of Kodayar Hydro-Electric Scheme will also pick up momentum with a provision of Rs. 3·5 crores in next year's Plan.

In the present context of acute shortage of foreign exchange, the Planning Commission has not agreed to any new schemes being included in next year's Plan, for which firm foreign exchange commitments have not already been made. We should however keep new schemes ready so that they could be pressed for sanction as soon as the prospects of foreign aid improve. The project report on Tuticorin Thermal Plan is already with the Government of India and we hope that they will soon accord their technical approval. We have reached an agreement with Kerala Government for the execution of Pandiyar-Punnapuzha Scheme with an installed capacity of 100 mWs and this scheme is also now awaiting the sanction of Government of India. Installation of additional units of a capacity of 110 mWs at the existing Kundah Power Stations III and IV is also one of the schemes proposed for the Fourth Plan. Even when all these schemes are put through, supply of power will fall short of demand. We, therefore, attach great importance to the expeditious execution of the Kalpakkam Project which owes a good deal to the foresight of the late Dr. Bhabha.

Technical education

There are at present 12 Engineering Colleges including the Indian Institute of Technology and 35 polytechnics including the Institute of Catering Technology. The intake in the colleges has increased from 1,157 at the end of the Second Plan to 2,167 in the Third Plan period. Likewise, the intake in polytechnics have increased from 2,910 to 4,792 during the Third Plan period. Fourteen Junior Technical schools have also been opened to provide education with an engineering content to students at the high School stage. Among the programmes visualised for next year, the development of the newly started Government Engineering College at Salem into a full-fledged institution will recieve special attention. Among the polytechnics the construction of permanent buildings for the Government Polytechinc at Tuticorin has been assigned priority. While the construction of buildings for the Polytechnic for Women at Madras has commenced, the work in other two places will be taken up as soon as land becomes available. A separate Institute of Textile Technology has started functioning in the current year at Madras. Another new development of long-term significance is the establishment of an Institute of Commercial Practice in 1965-66.

There are now 30 Industrial Training Institutions in the State, with about 9,600 seats. It is proposed to step up the admission capacity in I.T.Is. further by about 10,000 during the Fourth Plan period. To start with, it is proposed to provide 3,000 additional seats in 1966-67 in the existing Industrial Training Institutes.

Elementary education

By the end of the current Plan period, enrolment in schools will be of the order of 92 per cent in the age-group 6—11, 49 per cent in the age-group 11—14 and nearly 31 per cent in the age group 14—17. These achievements are substantially in excess of the national average. We have laid emphasis on the enrolment in particular of children from the poorer strata of society and have sought to remove progressively the various social and economic handicaps which have denied them access in the past to educational facilities. The implementation of the midday meal scheme, the expenditure on which in the next year will be nearly

Rs. 2 crores and supply of uniforms with public co-operation and support have helped in considerable measure the enorlment of children from under-privileged sections of society. As a further important step calculated to facilitate the attainment of cent per cent enrolment at the primary stage, we have included provision in the Fourth Plan for the supply of text-books, free of cost to all poor children. In the next year's budget which marks the beginning of the Fourth Plan, we propose to make a start with the supply of free text-books to all children in Classes I to III who have been admitted to the benefits of the midday meal scheme.

In the next year's budget estimates we have provided for the enrolment of 3·5 lakhs additionally of children of the age-group 6—14 in elementary and higher elementary classes.

The pioneering step we took two years ago to make, education free up to the secondary stage has imparted as anticipated, a great stimulus to progress in this field. The number of new high schools opened in the Third Plan is 983 and expenditure on secondary education has registered an increase from Rs. 5·51 crores at the end of 1961–62 to Rs. 13·18 crores in 1966–67. The budget estimates for next year seek to provide the necessary resources for additional enrolment of 80,000 children of the age-group 14—17. Special mention should also be made of a provision of Rs. 47 lakhs for construction of laboratory buildings and supply of scientific equipment to the high schools so as to enable them to improve the standards of instruction in science subjects.

The teacher

The Government have always recognized that the teacher is the centre of all educational programmes and that all steps should be taken within the resources available for improving the lot of the teacher. We have already brought about uniformity in scales of pay of teachers serving in different agencies. Government also now meet in full the commitments on account of the emoluments of teachers in aided secondary schools. They have recently decided to meet from their own funds the contribution towards the provident fund of teachers serving in aided secondary schools. Madras has also been the first State in India to implement the triple scheme of retirement benefits for teachers, including, in particular, a scheme of pension supplementing the other benefits in the form of provident fund and insurance. With the increase in the quantum of minimum pension of Government servants to Rs. 20 per mensem, there have been requests for similar increase in the pension of teachers also. The Government have decided to concede this request. With effect from April 1966 the minimum pension of teachers will be raised to Rs. 20 per month. This will entail and additional expenditure of Rs. 6·85 lakhs.

Expansion at secondary level has in its turn necessitated augmentation of facilities for collegiate education. At the end of the 1965–66 we will have 93 colleges with facilities for admission of 45,000 students at the Pre-University classes. In the last two years in particular, Government have sanctioned the opening of a number of colleges in the mufassal as part of their policy of promoting a wide diffusion of facilities for higher education. Next year's budget estimates provide for the opening of six more Arts Colleges, most of which will be located in educationally backward areas. We have also earmarked suitable provision for construction of buildings for the newly started Arts Colleges.

Medical and public health

Among the other programmes which render the Plan meaningful to the common man, schemes for improvement of public health are no doubt significant. Apart from rural water-supply programmes, we have pushed through a number of urban water-supply schemes in the current Plan period. The needs in this regard are no doubt very large in relation to our resources and even so we have endeavoured to make adequate provision for these programmes in the budget estimate for next year.

By far, the most significant achievement in the sphere of public health in the current Plan period has been the eradication of Malaria which till recently ranked as one of the major scourages of the country. This programme which has absorbed an outlay of Rs. 4·47 lakhs in the Third Plan period is nearing successful completion. We would have by the end of the current year 210 Primary Health Centres in position and in next year's Plan we have made a provision of Rs. 61 lakhs for the setting up of 120 additional Primary Health Centres. The main difficulty in the establishment of Primary Health Centres has been not resources, but dearth of doctors willing to serve in rural areas. This problem already difficult has been rendered more acute, with the diversion of a number of doctors to defence forces. An enduring solution to the problem of expansion of medical facilities in rural areas can, therefore, be found only through a vigorous programme of expansion of medical colleges. The progress we have made in this regard in 1965–66 is truly impressive. The admission capacity in our medical colleges has been stepped up in the current year from 700 to 936, with the opening of two medical colleges at Chingleput and Tirunelveli.

The expansion of medical colleges now on the anvil also lends urgency to the long-felt need for establishment of a Post-Graduate Medical Institute in Madras. The University has already made a start in this regard with the setting up of a post-graduate institute for basic medical sciences. An Expert Committee has drawn up a scheme for the setting up of a post-graduate institute at a cost of nearly Rs. 5 crores. This scheme, which will also entail substantial expenditure in foreign exchange

can be pushed through only as a Centrally-sponsored scheme and we hope that the Government of India will soon accord their apprvoal for this scheme.

Though in a production oriented plan of the kind we have visualised for 1966-67 building programmes have necessarily to be accorded lower priority, we have made reasonable provision for construction of new buildings for hospitals and dispensaries. The budget estimates provide among other things, for construction of new hospital buildings at Pollachi, Chidambaram, Theni, Ambur and Tambaram.

Backward classes

The welfare of Backward Classes has always been of special concern to Government. We have made a provision of Rs. 5,30 lakhs in 1966-67 for schemes for the welfare of Scheduled Castes and Backward Classes, of which a sum of Rs. 171 lakhs will figure as Plan outlay inclusive of Centrally-sponsored schemes and the rest as non-Plan outlay. Schemes for the educational advancement will as usual claim the bulk of the resources. A provision of Rs. 1,48 lakhs has been made for award of scholarships. The provision for acquisition of house-sites for Harijans has also been stepped up and will be of the order of Rs. 44 lakhs in 1966-67.

The major effort awaiting us next year will be the finalisation of the Fourth Plan on the broad lines already indicated in the draft outline of the Plan. While the programmes as indicated in the outline may undergo some modifications in the light of the foreign exchange position, we hope that it will be possible for us to preserve the essentials of the Plan and attain the rate of growth we have visualised. Central assistance for the State's Plan will be of crucial significance in determining its size and we have no doubt that in taking a view on the scale of assistance for the Plan, the Planning Commission will endeavour to help those States which have done their best in mobilising resources for the Plan and in utilising them fruitfully.

Economy and efficiency

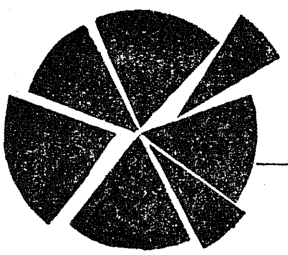
Whatever be the scale of Central assistance, it is clear that a Plan of the magnitude we have undertaken to perform will call for the utmost restraint in public and private spending. From this point of view, economy in administrative expenditure assumes paramount importance. No doubt, a substantial part of the increase in expenditure is on categories such as teachers, doctors nurses, and agricultural extension officers and is thus inextricably linked with expansion of developmental programmes. A sizable part of the increase is also due to revision of scales of pay and successive increases in rates of dearness allowance. By and large we have followed a prudent policy in regard to appointment of additional staff, particularly for purposes not connected with the Plan. Even so, there is need for a comprehensive review of the growth in establishments in different departments, with a view to explore possibilities for economy. It is with this end in view that we have set up a High Power Committee on Economy and Administrative Reorganization.

Economy and efficiency should indeed be our watchword as we prepare ourselves for the tasks we face in the Fourth Plan period. There can be no going back on the process of growth we have initiated, for, a faster rate of growth is the only answer to the many problems which confront us. If we can rekindle in our people the same sense of unity and determination which they so spontaneously displayed in meeting the external threat a shortwhile ago, it should not be difficult for us to overcome the problems facing us and march towards the goal of economic self-reliance. (Excerpts from Budget speech).

BOOK REVIEW

THE MADRAS STENOGRAPHER'S GUILD SILVER JUBILEE SOUVENIR

The Silver Jubilee Souvenir of the Stenographer's Guild, Madras, is as much informative as it is attractive. It contains very good articles written by experienced men in the field. The Souvenir, not only gives an insight into the problems of the profession but also indicates the nature of the task that would have to be faced by its members in the context of the changing socio-economic set-up in India. The publication is a very valuable guide to the profession.



New CENTRAL BUDGET PROPOSALS

Union Finance Minister Sri Sachindra Chaudhury presenting his first budget proposals for 1966-67 said that the total revenue receipts next year at the existing levels of taxation were estimated at Rs. 2,617 crores and expenditure on revenue account at Rs. 2,407 crores leaving a revenue surplus of Rs. 210 crores.

The Union Finance Minister made the following Budget proposals for 1966-67 :—

Excise duty on crystal sugar will be raised from Rs. 28·65 to Rs. 37 per quintal, with a corresponding increase on khandasari sugar. If this increase is passed on fully to the consumer, it may result in an increase in price by 8 to 9 paise per kilogram of crystal sugar. The revenue yield from this will be Rs. 21·93 crores.

Direct and Indirect Taxes

The duty on cigars and cigarettes, as well as on unmanufactured tobacco for use in the manufacture of cigarettes and pipe mixtures, will also be raised by about 25 to 30 per cent. These increases are expected to yield additional revenue of Rs. 9·01 crores. The incidence of this increase will be about 5 paise per packet of expensive cigarettes and 1 to 2 paise per packet for the relatively cheaper ones. The excise duty on light diesel oil is proposed to be raised by Rs. 60 per kilo litre. The additional revenue will be Rs. 5·35 crores.

It is proposed to increase the excise duty selectively on cotton yarn and cotton fabrics. There will be no increase in the case of coarser counts of yarn. In the case of fabrics, the increase will be only in respect of processed products such as mercerised shrink-proof and organdie processed varieties. Duties on rayon and synthetic yarns are also being slightly raised. The additional revenue from all these will be Rs. 14·03 crores.

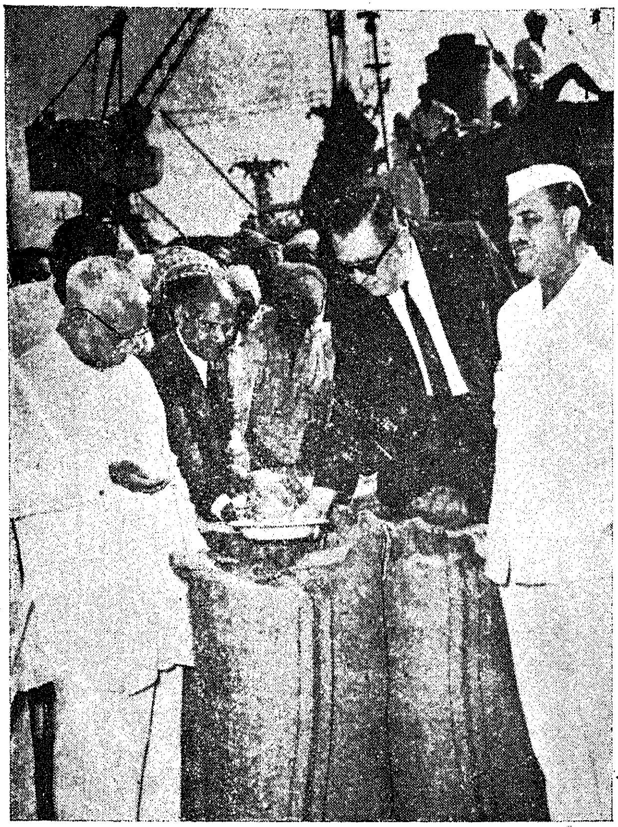
Excise duties on a few other items such as sodium silicate and carbon dioxide are being raised and slab concessions on paper boards reduced. Additional revenue on these accounts is estimated at Rs. 1·46 crores. New duties on optical bleaching agents and synthetic detergents are expected to yield Rs. 58 lakhs. Total increase from exicise duties and the counter-vailing duties will be Rs. 52·86 crores, of which the State's share will be Rs. 10·07 crores.

In the field of personal tax, it is proposed to increase the existing limits of total income not chargeable to tax by Rs. 500. The existing limit on total incomes exempt from tax in the case of resident individuals and Hindu undivided families, etc., is being raised by Rs. 500. Similarly, personal allowance on which tax relief is given to resident individuals and Hindu undivided families are being increased by Rs. 500.

A special surcharge of 10 per cent on the tax payable by all non-corporate assessees is proposed to be levied. It is proposed to exempt persons with incomes upto Rs. 25,000 from annuity deposits. At present, the exemption limit is Rs. 15,000. The new exemption limit will be effective from the assessment year 1967-68. including advance deposits to be made during 1966-67, Expenditure tax is proposed to be abolished. Rates of gift tax applicable to different slabs of value of gifts are being reduced. The exemption limit for gift tax is increased from Rs. 5,000 to Rs. 10,000. However, rates of estate duty on certain intermediate slabs between Rs. 1 lakh and Rs. 10 lakhs are proposed to be increased. Estates of members of police forces killed in action in defending the borders of the country would be exempted from estate duty in the same manner as members of the armed forces.

Corporate Taxation

Tax on bonus shares on companies and tax on notional capital gains in the hands of share-holders is being abolished. The rates of tax on corporate incomes are being increased by approximately, 10 per cent of the existing rates. Existing tax of 12·5 per cent levied on domestic companies with reference to the amount of



The first consignment of emergency American wheat which has reached Madras Harbour, was formally handed over by Dr. Robert W Caldwell, American Consul in Madras to the Chief Minister, Sri M. Bhaktavatsalam, at the Madras Harbour on 19th February 1966. The Chief Minister and the American Consul are looking at a sample of wheat. Sri Shah Nawaz Khan Union Deputy Minister for Labour (extreme right) is also in the picture.

their bonus issues will be discontinued. The dividend tax of 7·5 per cent on companies will hereafter be applicable only on that part of equity dividends declared or distributed which is in excess of 10 per cent of the paid-up equity capital. The surtax on companies is proposed to be reduced from the existing level of 40 per cent to 35 per cent.

Simplification

Certain measures for simplification of the tax structure, particularly with reference to taxes on companies, have been introduced. Instead of the existing system of 80 per cent gross tax and a number of rebates, effective rates of tax have been stated directly for the incomes of companies. Certain other measures have been proposed to tighten up the existing provisions of the law. One such is to charge interest on persons who are responsible for deducting income-tax at the source, if they fail to deduct or to credit the tax deducted to Government within the prescribed period. In regard to charitable trusts also, it is being provided that if any part of the income or property is utilised, directly or indirectly, for benefit of the founders, etc., of such trusts the trusts will not enjoy exemption from tax as at present.

As measures of fiscal incentive, the list of priority industries for purposes of development rebate is being extended to include three more industries, namely, tea, newsprint and printing machinery. In regard to the tea industry, the development allowance for new planting which is at present allowed at the rate of 40 per cent of the actual cost of such planting is being increased to 50 per cent thereof. For re-planting, development allowance is being increased from 20 per cent to 30 per cent. Besides, the allowance is proposed to be granted in two stages, first for the year following the year in which the land is prepared for planting or re-planting, and the balance for the fourth year. The present law provides for this allowance only at the end of the fourth year.

Financial Corporations

Approved financial corporations are at present allowed to deduct amounts carried to special reserve accounts up to 10 per cent of the total income for purposes of computation of taxable income. It is now proposed to increase the deduction to 25 per cent in respect of corporations whose paid-up capital does not exceed Rs. 3 crores. Provisions with regard to closely-held companies have also been liberalised in certain directions in respect of such companies as are engaged partly (and not necessarily mainly as at present) in manufacturing industries.

In regard to the shipping industry, the requirement that 75 per cent of the development rebate should be held in a special reserve for purposes of development is being relaxed to 50 per cent. Certain other incentives

CENTRAL BUDGET AT A GLANCE.

(In Crores of Rupees).

	Budget 1965-66	Revised 1965-66	Budget 1966-67
Revenue Budget			
Receipts ..	2345·87	2469·51	2617·12* + 101·51
Disbursements	2116·48	2187·42	2407·41
Deficit (—) Surplus (+)	(+) 229·39	(+) 282·09	(+) 209·71 + 101·51*
Capital Budget			
Receipts ..	2166·24	2162·86	2160·50† + 92·12†
Disbursements	2083·30	2247·86	1952·50

*Effect of Budget proposals

†Effect of Budget proposals.

have also been provided in respect of the National Defence Remittance Scheme, and in regard to the dividends from the Unit Trust.

Small savings

With a view to encouraging small savings, the requirement of deduction of tax at source will be waived, subject to certain conditions, in the case of small investments in Government securities. Similarly, the interest on the new series of National Savings Certificates to be issued through the State Bank will bear the same concessional treatment as the existing series of National Savings Certificates. In the case of income from units of the Unit Trust of India, income up to Rs. 1,000 will be excluded from total income for purposes of tax assessment in the case of all assessees irrespective of the amount of their other income. This should make for simplification as well as greater incentive for investment in the Unit Trust.

The rate of Central sales-tax on inter-State sales is proposed to be increased from 2 per cent to 3 per cent, with effect from July 1, 1966. The ceiling limit on the rate of local sales-tax on commodities of special importance, such as coal, cotton, hides and skins, etc., is being raised from 2 per cent to 3 per cent, with effect from the same date. This will enable States to raise the rate of local sales-tax on such commodities, if they so desire. Except for an estimated additional revenue of Rs. 50 lakhs to the Centre from sales in the Union territories, the revenue from this increase will accrue wholly to the States.

Effect of Changes

The revenue effect of the changes in regard to personal taxation would be a gain of Rs. 22·14 crores and in respect of corporate taxation, of Rs. 36·07 crores. On the other hand, there will be a reduction on capital account of Rs. 9·39 crores in the yield of annuity deposits. Apart from their share of Rs. 10·07 crores in Union excise and additional yield of Rs. 69 lakhs in respect of estate duty, the States will get Rs. 34 crores in a full year from the two changes that had been proposed in respect of the sales-tax.

The total additional resources available to the Central Government as a result of the Budget proposals would be about Rs. 92 crores which would still leave a gap of Rs. 25 crores.

Vegetables grown at the Government Estate under the grow more food scheme.

The Tamilnad Handloom Weavers' Co-operative Society, Madras, organised a dress parade on 5th March 1966 at Madras, so that Madam House Mori an outstanding fashion designor of Japan and her fashion team which arrived Madras on 4th March 1966 on a three-day visit, may have a close look at the choice of handloom fabrics available.

MADURAI University

The following is the speech of Sri P. Chandra Reddy, Acting Governor of Madras, at the inauguration of Madurai University, Madurai, on 6th February, 1966.

In the southern region of this State, comprising the districts of Madurai, Tirunelveli, Ramanathapuram and Kanyakumari, there are about fifty-two arts, science and professional colleges which are affiliated at present to the University of Madras and which provide for courses of study leading up to degrees in arts and science subjects and also professional degrees. The need for setting up a new affiliating-*cum*-teaching university for the southern region came to be felt about a decade back. There is already a University Centre at Madurai set up by the University of Madras. The University Grants Commission expressed the opinion that this Centre had developed to such an extent that it was capable of being raised to the status of a full-fledged university. In addition to the above factors, to satisfy popular demand, particularly from the large number of students taking up university courses of studies in the South, Madurai University has to come into existence. The necessary legislation has been passed by the Government and I have no doubt that it also marks a fitting culmination of the efforts of the Madras University towards the promotion of post-graduate studies and research in the southern region of our State. It is needless to mention that this university mainly owes its existence to the wise and far-sighted policies of our Government and the abundant interest evienced by our Education Minister who is also the Chief Minister and to the wholehearted co-operation extended by the Madras University, particularly its Vice-Chancellor.

A centre of learning

Historically speaking, there is a special appropriateness in Madurai becoming the centre for this new university. The ancient history of Madurai is bound up with the history of the Pandyas. When we think of this ancient city, we are reminded at once of the classical Sangam age. Madurai was the seat of the Tamil Sangam and the Pandyan kings were, from the very dawn of history, great patrons of Sangam literature. It was they who founded it, nurtured it and made it distinguished in grammar, philosophy, ethics and poetry. The Sangam literature which has been handed down to us in the celebrated works like "Tolkappiam" and "Tirukkural" is an invaluable treasure and an imperishable heritage which will be the possession of all as long as the Tamil language and literature last. It should give special joy to all that at this ancient and historic city with a glorious past and rich tradition in education and learning with the famous temple of Meenakshi in the vicinity, this new university is being established.

Aim of education

We have chosen the path of democracy because it affords the maximum opportunity for the growth of the individual, for his participation in the affairs of the nation and for the preservation of the human dignity. For the successful working of democracy, adult education has to be imparted on the most extensive scale since ignorance and freedom cannot co-xiest.

Our Constitution assures equality of opportunity to all the citizens to find self-fulfilment and self-expression and to achieve the best out of life. Equality of opportunity is the pre-requisite to the full utilization of the diverse and multiple talent in man. A society like ours will have to seek the development of human potentialities at all levels and to do everything to avoid wastage of human resources. Therefore, it is advantageous to invest, as much as our resources permit, in educating its populace. It is by such an investment that the legitimate demands of social and economic justice could be met. This would give an economic and social content to our freedom.

Education aims at producing good members of society who are patriotic and disciplined and who will understand their duties and responsibilities and also the imperative need to protect our democratic institutions. As our Vice-President Dr. Zakir Hussain observed on one occasion, it is for the universities to see that education means the acceptance of responsibility, that the self-realization of individuals who come under their charge, contributes to the realization of the social and moral ideals of our national State. Training for democracy postulates a balanced education in which social virtues, intellectual development and practical skill receive due consideration. Education creates a spirit of democracy and encourages a scientific enquiry and philosiphical toleration. It is the foundation of democratic freedom.

Achievement of success in a democratic form of Government is one of the most difficult tasks. Felix Frankfurter of the Supreme Court of Amercia said:

> " A constitutional democracy like ours is perhaps the most difficult of a man's social arrangements to manage successfully. Our scheme of society is more dependent than any other form of Government on knowledge, wisdom and self-discipline for the achievement of these aims, for our democracy implies the reign of reason on the most extensive scale. "

This statement, though made in the context of the American Constitution, applies with equal appropriateness to our democracy. To achieve the objectives of our Constitution, our State has been doing everything it could in the cause of education at all levels. For example, secondary education is now free throughout the State. The establishment of this university marks one more milestone in the progress of higher education in the State.

Role of Universities

A widespread understanding of the primary functions which the universities have to perform in the service of the nation is essential if the sources of their usefulness are to be preserved. If we study and analyse the aim and purpose of education and the functions performed by universities and other educational institutions in this context, it will be seen that the main aim of education is to make man a civilized being; to make him a full man; and to shape him into an organic being capable of displaying his powers of intellect. It is education which develops intellect; weans him away from the path of ignorance and inactivity; and leads him on to the domain of light, knowledge and wisdom. Man learns to become a social being with all social virtues. Education gives the right content for his thoughts and changes impluse and instinct into activity guided by reason and forethought. What marks out an educated man from the multitude is the general tenor of culture imbibed by him in the course of his education and training. Appreciation of the problems of life in their proper perspective is the direct result of such training and education. All human activities depend for their quality, on the quality of the individual and this, in its turn, depends on the success of the system of education in developing a well-balanced human personality in which intellect, emotions and the will are harmoniously blended.

Education helps a person to eschew qualities which are base and mean, lifts him up from the mire of sub-human strate and elevates him to a position wherein he can realise his duties and responsibilities unto himself, to his family, to his fellow-beings and to the world at large. It has to be made clear that education could never mean only acquisition of knowledge by obtaining university degrees. It has to be conceded that our whole life itself is a university and every minute we go on learning, whatever be our degrees and other qualifications. It is a ceaseless process, for what we learn in a life-time is only so much as to help us to appreciate the magnitude of our tasks and the comparative insignificance of what has been learnt in relation to what yet remains to be learnt.

Social aims

In another sense, the prime function of education is to bring out the latent talents of man and to make him a fit instrument for living a life of glory. It imparts brilliance and provides a sharp edge to an otherwise blunt weapon, and enables man to understand himself and his environment and prepares him to be a fit vehicle for dissemination of knowledge to others. Another aspect of true education is that it imparts correct social vision. The alumni should be inspired by high social aims. The social conscience of the students should be widened and deepened. People should not pursue their private ends without regard to the social consequences of their activities. They cannot benefit from social order and progress without making any contribution to it. Social responsibility is a concomitant of individual freedom. Education has to play an important role in the improvement of community life in modern India. Universities should create a self-understanding society, a society which will have an intellectual leadership with a capacity to express and to evoke our society's aims and tasks and prospects. The common man should be made conscious of the sanctity of social relationship and should be taught to perform his various duties as a member of the community.

Democracy depends upon the attainment of a high standard of general, vocational and professional education by the largest number of people. Dissemination of knowledge, incessant search for truth and unceasing effort to discover the meaning of life are the vital tasks of higher education. Cardinal Newman felt that the magic power of great teaching to elicit creative response in young minds consitututed the essential university activity. His was and still remains an attractive theory.

It is of fundamental importance that universities should train the alumni for wise and effective leadership in politics, in administration and in every sphere of life which is essential if our nation and our culture are to survive and flourish. A balanced personality should be developed in university men and women to enable them to provide leadership in many fields of public life. President Truman once remarked that the national policies of a country should be administered by men of broad experience,mature outlook and sound judgment. Everyone who comes into the university would be encompassed by its traditions and its values and would take something of them with him when he leaves. Universities must stand for these ideals which can never be lost so long as men seek wisdom and follow righteousness. It must be the desire of everyone to see that this new university builds its own valuable traditions as it grows, keeping in view the demands of the times, on the one hand, and helping to preserve our age-old culture, on the other.

Visible symbol

Our country which is on the threshold of a new industrial era calls for an intensification of scientific and technological education and research and for strenthening our capacity to make significant contribution in extending the frontiers of knowledge. Science and technology play a dominant role in the progress of a country. Therefore, universities must attach the utmost importance to the study of these subjects and especially to research which is essential in the context of our present-day needs of national defence. Equally important is the study of the humanities. Humanities will help a person to develop an integrated personality and realise his inner aspirations and ideals and will also inculcate a love of and respect for ethical principles. Indian thought has always emphasised the need for the harmonious development of all aspects of the personality.

The university should be a visible symbol and practical expression of the highest influences for intellectual and moral culture. The functions of universities, particularly in the present age, are really more widespread and more responsible than in days gone by. A university of modern conception is not merely an agency for supervising, teaching and higher learning nor is it just an abstract body for conducting examinations, assessing the capacities of students and declaring results. A university must have a soul, in the same manner as any living being, in order to make its impact on the lives of its teachers and the alumni. It has to live and display adequate vitality to disseminate knowledge and to cultivate arts and studies that mellow character and refine outer and inner life. In the words of Tagore, "the highest mission of education is to help us to realise the inner principle of unity of all knowledge and all the activities of our social and spiritual being". It has been held by scholars that a university is not only a centre of wide ranging studies but the colloboration and synthesis of multifarious approaches to the problems of the universe-physical, intellectual and spiritual. Cardinal Newman says:

"A university is a place in which the intellect may safely range and speculate, sure to find its equal in some antagonist activity and its judge in the tribunal of truth. It is a place where enquiry is pushed forward and discoveries verified and perfected and rashness rendered innocuous and error exposed by the collision of mind with mind, and knowledge with knowledge."

The purpose of universities has been recognized throughout the ages as the acquisition, propagation and application of knowledge. Such knowledge should be utilised for the moral and material advancement of the people and for the promotion of social happiness and spiritual excellence. The progress of technology and the march of science should, by no means, be interpreted to mean that our educational pattern should be mechanical or soul-less. It may be said that the real and worthy role of universities in the life of a nation is to pursue a mode of teaching and provide an atmosphere which will inculcate moral and spiritual discipline.

Madurai University

To-day the foundation of this university is being well and truly laid in this holy city which is celebrated for the Thiruvilayadal of Lord Chokkanatha so that it may vibrate spiritual impulses. I hope that as the university grows from strength, it will continue to reflect the noble traditions of Tamilnad. I am sure the corporate activities of the various colleges affiliated to it will form a proper background for the realization of all that a University stands for. Tamilnad has a continuous tradition of learning and respect for knowledge—particularly Madurai, the heart of Tamilnad, which has been the seat of Tamil Sangam of yore. Having regard to the historical and literary traditions of Madurai it is appropriate for this university to specialize in advanced study and research in Tamil and in South Indian history and archaeology. Special emphasis will no doubt be laid on Tamil development and Tamil culture.

I am really glad that Professor T. P. Meenakshisundaram Pillai has taken over as the Vice-Chancellor of this new university. He is a distinguished product of the Madras University and is well-known for his scholarship and attainment. I am confident that his guiding hand will make it a really great university and that as the years roll by, this university will develop distinctive characteristics of its own and that its alumni will go forth into the world as torch-bearers of light and learning.

I wish the new university a long and glorious record of prosperity and achievement.

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TAMIL SHORTHAND MANUAL

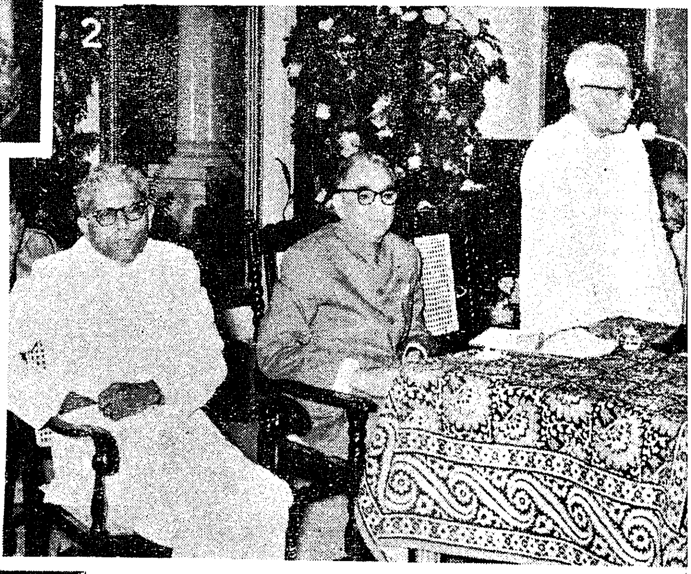
The Government have recently published a Tamil Shorthand Manual. This was the result of the action initiated by the Government as early as 1954. In July, 1954, the Government constituted an Expert Committee to advise them on the prescription of a suitable Shorthand Manual in Tamil. This Committee examined critically the Manuals prepared by two Tamil Reporters of the Legislative Assembly Department and recommended the Manual prepared by Sri G. S. Ananthanarayanan for adoption as a Text Book. The Official Language Committee also having supported the recommendation of the Expert Committee, the Government directed that Sri G. S. Ananthanarayanan's Manual should be published as a Government publication and made available to the public for sale.

The printing of the Manual proved no easy task. It was found that neither the Government Press, nor the private printing presses in India could print satisfactorily the shorthand outlines with precision. The question of entrusting the work to Sir Issac Pitman & Sons Ltd., London, was considered and after a good deal of correspondence was dropped in view of the high cost and delay involved. The Manual was finally got printed at the Photo-Zinco Press of the Central Survey Office adopting an elaborate process to ensure correctness and precision of shorthand outlines.

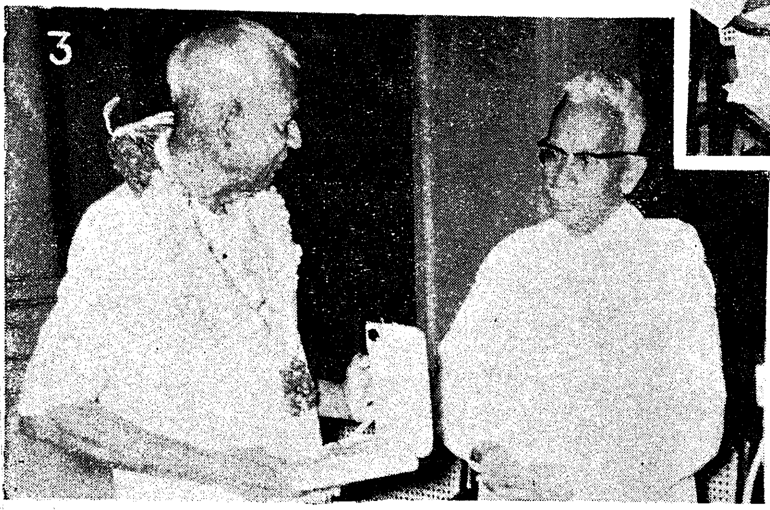
The Manual has been printed on glazed paper and is a handsome publication. It contains exercises and explanations. It supplies a long felt need of the students of Shorthand.

The Manual has been priced at Rs. 7, calico bound and Rs. 6, ordinary bound. Copies are available for sale at the Government Publications Depot, Mount Road, Madras-2, and with all the authorized agents for Government Publications.

1. A Baby Show was conducted by the Indian Council for Child Welfare at the Children's Theatre, Madras, on 3rd March 1966. Smt. Chandra Reddy, who presided over the function, is affectionately patting a child who won a prize in the show.



2. The Governor distributed Sixth State Awards to Elementary School Teachers. The Chief Minister who presided is addressing the gathering.



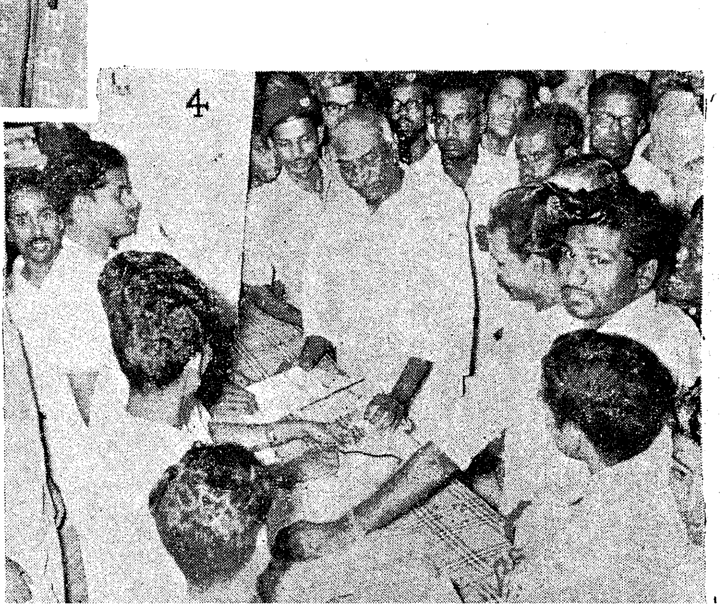
3. Sri P. Sri Acharya was presented with the Sahitya Akademi award by Sri M. Bhaktavatsalam, Chief Minister, at a special function held at Rajaji Hall, on 10th March 1966. The award was presented to him for his book "Sri Ramanujar" in Tamil.

4. The awards of the Madras State Sangita Nataka Sangam to distinguished artistes in music, dance, drama and film were presented by Sri M. Bhaktavatsalam, Chief Minister, at a function held at Rajaji Hall, Madras on 16th March 1966. The Chief Minister is with the artistes.

2. 12th All-India Handloom Week Exhibition was inaugurated by Sri P. Chandra Reddy, Acting Governor of Madras, at Egmore, on 27th February 1966. The Governor is inspecting one of the stalls in the Exhibition.

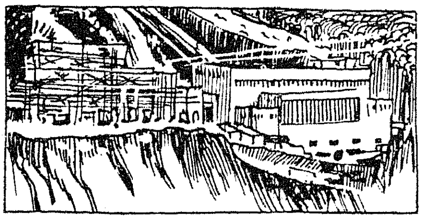
1. Sri. N. S. S. Manradiar. Minister for Co-operation is inspecting one of the stalls in the Exhibition.

3. The Chief Minister. who presided over the inaugural function of the Exhibition is addresing the gathering.



4. Sri K. Kamaraj, Congress President, visited the 12th All-India Handloom Week Exhibition. The Congress President is looking at some of the Handloom clothes at one of the stalls.

Biggest Power Project in Madras State



To tap the power potential of Kundah river in the picturesque Nilgiri hills has been the dream of the Power Engineers, since 1919. The Kundah Hydro-Electric Scheme represents a major step towards attainment of this dream—the cascading waters of Kundah river, helps to turn the wheels industry, to pump water to irrigate the fields and to light millions of homes, all with the power generated at the five powe rstations set up under the scheme.

The Kundah Hydro-Electric Scheme is the biggest Hydro-Electric Scheme so far undertaken in Madras State. Costing about Rs. 730 million, and a total installed capacity of 425 MW at five power stations, the scheme has been executed in two phases. The project received generous assistance to the extent of about 43 million Dollars from the Government of Canada, under the Colombo Plan Aid Programme. In grateful appreciation of this generous assistance, the power houses under the scheme have all been named as Canada Power Houses-1, 2, 3, 4 and 5. Of these Canada Power Houses-1, 2, 3 and 5 are already in operation with installed capacities of 60 MW, 175 MW, 120 MW and 20 MW, respectively. The 50 MW unit at Canada Power House-4 is being commissioned today, and a second 50 MW unit has been contemplated for installation at a future date.

Location

Two streams, the Avalanche and the Emerald rising amidst the group of High Peaks Devabetta, Karaikada, Koulinbetta and Porthimund, all over 8,000 feet in altitude combine to form the Kundah river. After the confluence, the river takes a south easterly course and is joined by Sillahalla at an altitude of 6,000 feet. The Kundah has then a fall of about 200 feet and runs in cascades for about 2,000 feet to reach the bridge near Kundah village where it is joined by the Kanarahalla and Koulimulihalla streams. Below the birdge the river runs in cascades till it reaches a level of 2,100 feet where it is joined by the Pegumbahalla stream. Beyond that confluence it runs in rapids for about a mile and half and later in an easy gradient down to its junction with the Bhavani at an altitude of 1,340 feet.

The initial phase of the scheme, estimated to cost Rs. 354 million was included in the Second Five-Year Plan. The following works covered by this initial phase have already been completed :—

Initial phase

(i) A combined storage of 5,500 mc. feet. by building two dams across Avalanche and Emerald streams, with an inter-connection tunnel 2,367 feet long. (ii) A reservoir of 3,572 mc. feet capacity by building a dam across Upper Bhavani river, with a tunnel 9,740 feet long to connect this to Avalanche reservoir. (iii) A pressure tunnel 14,705 feet long from Avalanche reservoir to surge tank No. I from where penstocks lead to Power House-1. (iv) Canada Power House-1 on the right bank of Kundah river near Kundahpalam village with a gross head of 1,177 feet and an installed capacity of 40 MW. (v) Forebay dam for Canada Power House-2 across the Kundah river near Kundah village to collect the tail race water of Power House-1 and the run off from its free catchment of 44 square miles. (vi) Pressure tunnel 11,477 feet long from the forebay to a surge tank and penstocks therefrom to Canada Power House-2 located on the left bank of Pegumbahalla stream. (vii) Canada Power House-2 utilising a gross head of 2,470 feet with an installed capacity of 140 MW.

All the above works have been completed, as also the 110 and 230 KV transmission lines and sub-station extension at Thudiyalur, Salem and Villivakkam. The initial phase of the scheme received Canadian Aid under the Colombo Plan to the extent of about 21 million Dollars.

The total fall in the Kundah river that would be available for power generation is about 6,515 feet of which 3,650 feet was utilised in the initial phase. A scheme

for extension to the initial phase, and for utilising the balance 2,865 feet head, was taken up for execution in the Third Five-Year Plan. The estimated cost of this extension scheme is Rs. 376 million, and comprises of the following works :—

(i) A masonry forebay dam across Pegumbahalla stream, just below Canada Power House-2. (ii) A low pressure tunnel 34,852 feet long from Pegumbahalla forebay dam to surge tank No. 3. (iii) Two penstock lines each 3,534 feet long to Canada Power House-3. (iv) Canada Power House-3 with two 60 MW units with provision for a third unit to be installed at a future date. (v) Pillur Dam across Bhavani river forming a reservoir of 1,568 mc. ft. capacity. (vi) Canada Power House-4 on the down stream side of the Pillur Dam with a 50 MW unit initially, with provision for a second 50 MW unit to be installed at a future date. (vii) Canada Power House-5 at the exit of the tunnel from Upper Bhavani to Avalanche with a single 120 MW unit and provision for a second unit to be installed at a future date. (viii) Addition of the third 20 MW unit at Canada Power House-1 and the fifth 35 MW unit at Canada Power House-2. (ix) Diversion works and storages at Varahapallam, Porthimund, Parsons Valley, Katteri, Niralapallam and Western Catchment with a total storage of 3,475 mc. ft. and interconnecting tunnels totalling 21 miles. (x) A diversion weir and a pump house with two 1,100 h.d. pumps on the down stream side of Upper Bhavani Dam to pump the run off from 1·85 square miles of catchment area into Upper Bhavani Dam. (xi) A transmission system consisting of 37 miles of 230 K.V. line and 64 miles of 110 K.V. line with carrier communication and relaying. (xii) Necessary extensions to the sub-station at Thudiyalur, Erode and Madurai.

Canada power house-4

Of the above works, the additional 20 MW unit at Canada Power House-1, the additional 35 MW unit at Canada Power House-2, Canada Power House-5 with a 20 MW unit, and Canada Power House-3 with two 60 MW units have all been commissioned. The transmission lines and sub-station extensions have also been completed. Work on the Pegumbahalla forebay dam, Porthimund dam and Parson's Valley dam have also been completed while the work on the other storages are in progress.

Canada Power House-4 is located at the foot of the Pillu dam, on the left bank of the river Bhavani, near Pillur, about 28 miles from the nearest railhead Karamadai. Water discharged from Canada Power House-3 is impounded by the 288 feet high Venkataraman sagar (Pillur Dam) built across Bhavani River, after the confluence with Niralapallam Stream, and taken through two penstock pipes 18 feet in diameter embedded in the dam. One of these pipes serves the 50 MW unit being commissioned today while the second one is to serve the future unit. The tail water is discharged into the Bhavani River through a small tail race channel. The gross head is 245 feet, and the nett head 145 feet at the minimum tail water level. The switchyard is at right angles to the power house and the power is transmitted to the grid through 230 KV transmission lines.

The Pillur dam across Bhavani River is being built at bed level + 1,158, and impounds the discharges from Canada Power House-3, as also the run off from 321·685 square miles of free catchment of Bhavani basin, giving a total catchment area of 460 square miles. The dam has a gross capacity of 1,568 Mc. ft. and a net capacity of 1,233 Mc. ft. The height of the dam above the deep bed level is 250 feet, and above the deepest foundation level 288 feet, the highest in Madras State.

Pillur dam

The dam is of gravity type of rubble masonry, and involves the use of 1,75,000 unit (1 unit = 100 cft.) of masonry. The length of the dam at top is 1,170 feet and the width at top 21 feet to accommodate a roadway. The MWL and FRL is + 1,400 and the minimum draw down level + 1,300. The intakes and scour vent are located on the left flank.

There will be four crest gates of size 40 feet × 30 feet to pass the maximum flood discharge of 100,000 cusecs. The maximum stress on foundations at the deepest foundation level is 19·4 tons per square foot. The mortar proportion varies from 1 : 2½ to 1 : 5 depending upon the stress conditions. The impervious zone in front is of CM 1 : 3. Pure river sand has been used for the dam masonry. Fly ash has been used in the 1 : 3 cement mortar in replacement of cement up to 20 per cent by weight. The energy dissipating arrangements for the scour vent and spillway are of the usual silling basin type and were finalised after conducting model studies.

The two steel intake pipes embedded in the dam are each 220 feet long and 18 feet diameter, and each capable of discharging 3,000 cusecs. The steel is of G. 40·8 grade.

A quality with a minimum yield stress of 40,000 lb. per square inch and ultimate stress from 60,000 lb. per square inch to 75,000 lb. per square inch. The plate thickness varies from 5/8 inch to 7/8 inch. The sill of the intake is kept at + 1,210. One dresser coupling is also provided at the end of the pipe line and this coupling is located in the power house. There are two gates one regular and the other emergency. The hoisting equipment are kept over steel structures on top of dam. No steel liner is provided between the gates. The regular gate is of lift type with rollers, with sealing arrangements on the upstream face, and of size 14 feet × 19 feet 7 inches. The emergency gate is of siding

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vertical type and will be operated under balanced conditions for which a pillar is provided. The gate is of size 14 feet × 25 feet with sealing arrangements on the downstream side. Each intake is provided with fine screens at entry (semi-circular type) and bars spaced $2\frac{1}{2}$ inches at centres.

The scour vent is of size 12 feet wide by 8 feet high clear and is provided with one regulating gate and one emergency gate. The regulating gate is of radial type and the operating equipment is kept in the body of the dam. For access to the operating chamber, a cross gallery is provided from the power house end. The radial gate is capable of operating under various openings and heads. The emergency gate is of the usual lift type with necessary rollers, etc. The operating platform is kept on a steel structure on top of the dam. Steel liner is provided between the two gates and also for a short length below the regular gate. A coarse screen, semi circluar type, with bars spaced at 6 inches centres is also provided at entry. An air vent pipe is also provided below the regular gate and of size 48 inches diameter.

The power house

Situated at an elevation of 1,193 feet above M.S.L. the Power House Building 170 feet 6 inches long, 75 feet wide and 50 feet high, is of structural steel frame work with stone masonry walls built to accommodate two generating units ultimately. A repair bay is also provided at one end. The total excavation involved for locatingthe power house building is about 0·54 million cubic feet.

The turbine installed is of vertical Francis reaction type rated to develop 72,500 H.P. at a net head of 210 feet and a speed of 157·9 RPM. The runner is of 18 : 8 stainless steel and weighs about 25 tons. Regulation of water flow is by operation of 20 wicket gates. The turbine is directly coupled to a 56,000 K.V.A. 11 KV 38 poles, 0·9 PF vertical umbrella type generator, with the combined thrust and guide bearing below the rotor. This is the first 'umbrella' type generator to be installed in the Madras Grid. The 408 slots stator of the generator was received in four sections partially wound at the factory, each section weighing nearly 35 tons. The stator housing measures 35 feet across faces, which is the largest in the Madras Grid. The 38 pole rotor weighs nearly 150 tons. The overhead travelling crane is of 360,000 lb. capacity with an auxiliary hoist of 40,000 lb. capacity.

An interesting feature of this station is the wide variation in the tail race water level which is expected to vary from + 1,155·5 feet to + 1,190 feet which is the M.F.L. of the Bhavani river. While the turbine is set as close as possible to the minimum tail water level, the generator is set above maximum tail water level to avoid chances of submergence under flood conditions. This has resulted in a long shaft of 36 feet between the turbine and the generator, without any intermediate guide bearing, with consequent increased shaft diameter of 31 inches, the highest in the Madras Grid.

The generator terminal cubicles, neutral, excitation and voltage regulator cubicles are all arranged on either side of the generator. The voltage regulator is of G.E. make and incorporates an Amplidyne generator for control of the exciter voltage which in turn controls the voltage of the A.C. machine. The relay panels, control desk, L.T.A.C. and D.C. panels have all been erected on the machine hall floor itself, resulting in appreciable savings in the power house building and superstructure. A 220 V 270 AH lead acid battery has been installed, in a separate room on the machine floor. Cooling water supply for the generator air coolers and the bearings for turbine and generator, is obtained by tapping from the penstock through a pressure reducer.

The power generated is stepped up from 11 KV to 230 KV by means of a bank of three single phases transformers each rated 18,667 KVA, 11/230 KV, with one more unit as standby. The transformer are of the water cooled oil Forced (OFW) type. The 11 KV cables used for connecting the generator terminals to the transformers in the outdoor yard, are with special ozone treated Butyl Rubber insulation. The outdoor yard structures are of steel. From the outdoor yard, two 230 KV lines take-off, one to Canada Power House-3 and the other to Thudiyalur sub-station. Power line carrier communication is provided. Carrier channels are also used for supervisory control from Canada Power House-2 and for telemetering important values to Canada Power House-2. The discharge from Canada Power House-4 is fed directly into Bhavani River.

Estimate

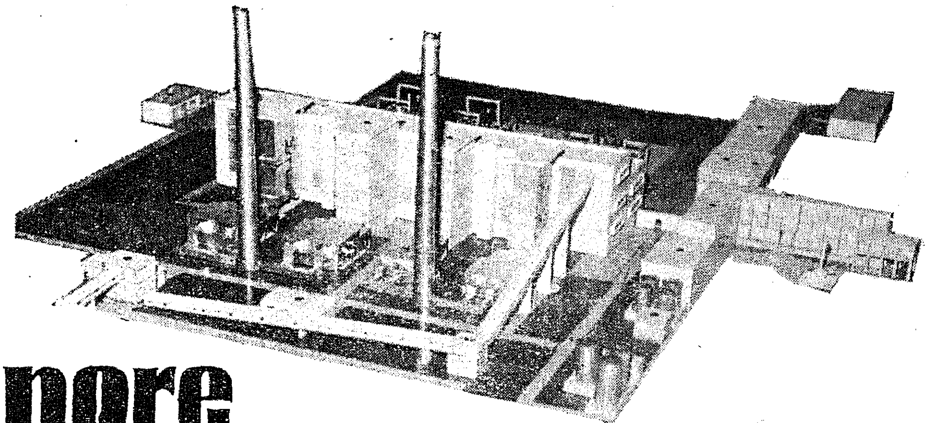
The original and revised estimated cost of the Generating Plant at Canada Power House-4, Pillur dam and Civil Works are indicated below :—

	Original Estimate.	Revised Estimate.
	(RUPEES IN	LAKHS.)
(1) Generating Plant, outdoor yard equipment and auxiliaries.	126·0	110·0
(2) Dam Civil Works and the Power house.	337·0	683·0
Total ..	463·0	793·0

Due to the installation of one 50 M.W. set at the Power House, instead of 2 Nos. 25 M.W. sets contemplated in the original estimate, there has been a saving of Rs. 16 lakhs on item 1. The increase in cost of the dam and other Civil Works has been due to the increased cost of land, cement, sand, steel, other equipment and labour, differences in the type of soil met with, variations in foundation levels, considerable drilling and grouting found necessary due to the stratified nature of rock, changes in the masonry quantities, and mortar proportions, andincrease in the size of intake pipe embedded in the dam.

Canada Power House-4 incorporates all the latest techniques in design and equipment, as in the case of the other power houses under Kundah Hydro-Electric Scheme. Its completion in just four years, has been the result of a co-operative endeavour by people from two countries, India and Canada, and a living monument to the benefits of the Colombo Plan Programme. The 210 million units of power that will go out from this station, to the far corners of Madras State, will be utilised in the factories, fields and homes, and represents a step forward in the march towards prosperity through power for the 35 million people of Madras State.

Canada Power House-4, fifth and the last Power Station under Kundah Hydro-Electric Project, was commissioned by Sri R. Venkataraman, Minister for Industries, at Venkataraman Sagar (Pillur Dam) on 27th February 1966. Picture shows a view of the Power House. (Inset) the Minister is commissioning the Power House.



Ennore THERMAL SCHEME

At the end of the Third Five-Year Plan, the Madras Grid will have 12 hydro stations and 2 thermal stations with a total installed capacity of 1,070 M.W. of which 969 M.W. or 90 per cent is from the hydro stations. Of these hydro stations Pykara, Moyar and the five Kundah Power stations are solely for power generation while the two Mettur power stations, Periyar, Papanasam and Sarkarpathy are irrigation-*cum*-power stations. At these latter power stations, irrigation is the first charge and power discharges have to be controlled during the irrigation period, to suit irrigation requirements. Thus, the effective capacity of the hydro stations gets reduced. Neyveli Lignite Corporation have an installed capacity of 300 M.W. and are giving 196 M.W. to the Madras Grid. The total effective capacity of the grid including relief from Neyveli amounts to 885 M.W. of which 624 M.W. or 70 per cent is hydro.

During the past few years due to delayed monsoon and inadequate rains in the catchment areas, the hydro generation has been subject to considerable reduction. In order to set right this imbalance between hydro and thermal power of the grid and to meet the ever growing demand for power, Government of India were approached in November 1963 for the installation of a Thermal station at Ennore with an installed capacity of 300 M.W.

Advance action

In September 1964, the Planning Commission accorded approval for the Ennore Thermal Scheme and authorised the State Government to take advance action in the Third Plan itself even though the scheme was included only in the Fourth Plan. It was subsequently decided that the capacity of the Ennore Power Station would be 340 M.W. and the plant shall consist of two units of 110 M.W. each to be procured under Czech credit (with at least 30 per cent indigeneous content) and two units of 60 M.W. each from the Tiruchirappalli and Ramachandrapuram Plants of Bharath Hevay Electicals Ltd.

Preliminary technical specifications for the plant and equipments were then prepared. A team of Engineers from Technoexport, Praha, Czechoslovakia, arrived in January 1965 and discussions were held on the technical aspects of the scheme. A contract with Technoexport for supply of Project Report and Working Drawing for the 340 M.W. Power station was entered into on 12th March 1965. Simultaneously, action was taken for acquisition of land and preliminary works such as levelling of site, laying of access roads, putting up of office and stores sheds, etc., were taken up.

Project report

The Project Report was received from Technoexport in August 1965. Further discussions were held with the team of Czech Engineers and approval to the Project Report was accorded on 1st October 1965. The scope of supplies of plant and equipments for the 2×110 M.W. units as well as some completing equipments for the 2×60 M.W. units were discussed and agreed to and a draft contract with Technoexport for supplies from Czechoslovakia was signed on 20th November 1965.

Land to an extent of about 250 acres has been acquired at Ennore, 9 miles north of Madras for locating the station. The site is bounded on the east by the sea and on the west by the backwaters of the mouth

of the river Korthalayar which connects with the sea during floods. Sea water for direct cooling of the condensers will be drawn from the backwaters (by providing a permanent inter-connection with the sea at the mouth of the river) and the warm water let out into the sea without any need for costly cooling towers. The Madras–Vijayawada broad-guage railway line is running very close to the site and a railway siding for receiving coal from the Singareni collieries will be provided.

A new 100 feet road is available from Madras to Ennore providing easy access to site. The site is an industrial load centre and close to the existing 110 K.V. Ennore sub-station. The ground consists of sandy loamy top soil with stiff clay mixed with coarse sand. Friction piles, pre-cast as well as cast-in-situ will be used for the foundations and these will be driven to depths up to 60 feet.

The turbine house will be a steel framed structure with a clear span of 27 meters. The main columns, will support a 125-ton overhead crane which will span the full width of the turbine house and traverse its entire length. There will be two R.C.C. chimneys 80 meters high, one for both 60 M.W. units and the other for both 110 M.W. units. The layout provides for a separate Control room building, Administrative Office block, Workshop, Stores, etc., as well a residential Colony for the Operation and Maintenance staff.

Fuel

Coal reception and storage facilities will be provided at the south where the required number of railway sidings will be laid. Low grade coal from the Singarene mines will be brought to the sidings by train loads in special 'BOX' wagons of capacity 55 tons nett each. Groups of wagons will then be shunted to the 2 Nos. wagon tipplers by the station diesel locomotives which will also marshal the empty wagons to the sidings. Bulldozers will be used in the coalyard for coal handling as well as for ramming. There will be duplicate conveyor belts of capacity 350 tons/hr. each, with crushers and screens.

The daily consumption of coal with an average calorific value of 4,500 K.cal/Kg. at the maximum output of 340 M.W. will be 5,000 tons approximately. Heavy oil will be brought in tank lorries/railway wagons and pumped into steel storage tanks.

The boilers will be designed for pulverised coal firing with additional heavy oil burning for stabilisation at lower outputs. Heavy oil can also be used at full load up to a fuel ratio of 25 per cent heavy oil to 75 per cent coal powder. Light oil will be used for starting.

The data for the 60 M.W. and 110 M.W. boilers will be as follows :—

	60 *M.W. boilers.*	110 *M.W. boilers.*
Nominal rating maximum continuous.	260 t/hr.	370 t/hr.
Nominal pressure	96 ata	139 ata
Live steam temperature ..	540°C	570°C
Reheated steam temperature.	..	540°C
Nominal feed water temperature.	230°C	240°C

Drum mills with ball charge for pulverising the coal will be provided and the pulverised fuel/oil will be led to tilting burners at boiler furnace corners. The boilers will have tube air heaters. For automatic boiler control, electronic system will be used. The boilers will be equiped with steam automatic controlled soot blowers and the combustion chamber will be cleaned by spray of automatic controlled boiler blow down water.

Turbo alternators

The 60 M.W. and the 110 M.W. 3,000 rpm turbo-alternators will be operated on the unit system, each boiler, turbo-alternator and is principal auxiliaries operating as a single operating unit. There will thus be no connections between the separate units and sets, the only common services being those of the station transformer supplies used for starting purposes only, circulating water, fresh water and treated make-up water.

The 60 M.W. condensing steam turbines will be of the two-cylinder impulse design. The high pressure cylinder will contain a two-row regulating stage followed by 13 impulse stages. The low pressure portion will be a double-flow cylinder with three stages of the outward flow type and this cylinder will be connected to two condensers. The set will be equipped with three L.P. and two H.P. feed heaters, along with feed water tank and deaerator. The 11 K.V. alternator will be rated 60 M.W. (68·75 M.V.A.) and air-cooled.

Chief Minister Sri M. Bhaktavatsalam is inaugurating the Ennore Thermal Power Project Scheme, Industries Minister presided over the function.

The 110 M.W. turbine will be of the impulse type arranged as three cylinder unit with reheating past the H.P. cylinder by means of flue gases in the boiler. The H.P. cylinder will consist of a two-row regulating stage and eight impulse stages and the intermediate pressure cylinder of 12 stages. The double flow L.P. cylinder will have four stages on either side and will be connected to two condensers. The unit will have 5. L.P. heaters, 1 mixer deaerator and 2 H.P. heaters.

The 11 K.V. alternators will be rated 110 M.W. (137·5 M.V.A.) and hydrogen-cooled at 2 atm.g.

Transformers and switchgears

The 60 M.W. units will feed the 110 K.V. switch-yard through 3 phase power transformers 63 M.V.A. 11 K.V./110 K.V. and connect with the grid through the adjoining Ennore 110 K.V.S.S. The 110 M.W. units will feed the 230 K.V. switch yard through 3 nos. single phase step-up power transformers 42 M.V.A· each, 11 K.V./$\frac{230}{\sqrt{3}}$ K.V. and connect with the gird through 230 K.V. lines to Korattur and Katpadi.

There will be 2 nos. unit transformers, 10 M.V.A capacity each 11·0/6·6 K.V. for the 60 M.W. units and 2 nos. 16 M.V.A. each 11·0/6·6 K.V. for the 110 M.W units to supply the unit auxiliaries. 2 Nos. 25 M.V.A. 110 K.V./6·6 K.V. station service transfor mers will be used for starting the units and for common auxiliaries.

All auxiliary motors above 160 K.W. will be rated for 6·6 K.V. voltage and all smaller motors and equipment for 415/239 V, 50 cycles. The D.C. equipment will be of 220 V. Acid battery will be used with rectifier and trickle charger.

Two unit control rooms will be installed, one for the two 60 M.W. units and the other for the 110 M.W. units. From here, the operation of the complete generating units from boilers to step-up transformers and putting the machines on bars will be controlled. A separate central electrical control room will be installed in the switchyard for controlling the 110 K.V. and 230 K.V. switchyards and the station home consumption switchgears.

Make-up water for the boilers is proposed to be obtained from wells at site through a demineralisation plant of 55 t/hr. capacity.

Circulating water

Sea water for the condensers will be taken through the backwaters. Water will be drawn through a duct via travelling screens to the pumping stations. The cooling water pumps will pump the water into the condensers through pipes under pressure. The warm water will be led out from the power station in steel pipes and thence through open channels into the sea. The nominal temperature of the cooling water would be 30° C with maximum 33° C. All slag and fly ash from the power station will be transported to the sea by a hydraulic sluicing system.

When completed, the Ennore Thermal Power Station will be one of the largest in the country. The 60 M.W. units are scheduled to be commissioned during 1968 and the 110 M.W. units during 1969.

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Sri N. V. K. K. NAMBIAR, M.A., Diploma (Economics)
Statistical Assistant Director, Office of the Director of Public Health, Madras.

Vital Statistics plays a very important role in the Socio-economic progress of the people through planned development. It is not merely a record of births and deaths. It is something more. It is the correct maintenance of the births and deaths register which helps us to assess the trend of population growth. Population forecast is essential for the success of the developmental programmes. If only the Government is in a position to forecast the population growth, say, ten years from now, it would be in a position to plan, to meet the requirements of the increasing population in respect of food, clothing, shelter, education, employment, and the like over that period. Without knowing the real population trends it would be very difficult for any Government to plan adequately for the betterment of its people.

The key

The growth of population is indicated by the increase or decrease in the number of births and deaths per thousand. It is here the vital statistics is holding the key to the socio-economic progress of the people. The maintenance of accurate births and deaths register, apart from the census taken once in ten years, helps to know the changes in population trend which enables the planners to formulate schemes to meet the future needs of the people. For example, a plan to meet the housing needs of our population, which is growing at, say, 1·5 per cent, in fifteen years can succeed only if the population growth is constant. On the other hand, if the population growth turns out to be say 2 per cent, after a few years, then naturally the plan will be inadequate to provide houses even after fifteen years. So if we are able to detect the change of rate of population growth we can immediately adjust our plans according to needs. This is possible only if correct vital statistics are maintained by all the units of the Registration. This again depends on the people's co-operation. Therefore, it is all the more important that people should know the crucial role played by vital statistics in the Government's efforts to raise their standard of living.

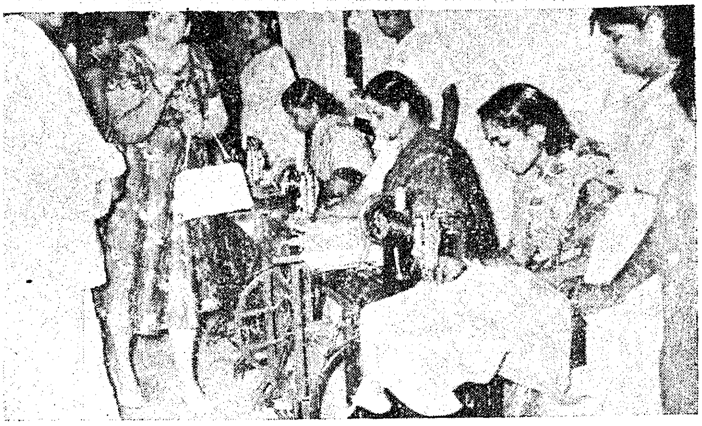
In the present context, correct vital statistics, is required for two major problems confronting us to-day. First, we have to examine whether the increase in food output is commensurate with the increase in population. The increase in population at any time is obtained by adding to excess of Births over Deaths, immigration minus migration. Second, we have to find out the impact of Family Planning Programmes which aims at lesser number of children.

Correct particulars

We have to gather correct particulars of population under national totals, state totals, social segments, cultural segments, etc. Public health planning too would be more efficient if the death rates were known by age, by geographic area, by causes, etc.

Every civilized country in the world has a system for proper registration of births and deaths and is maintained at a high level of accuracy and completeness. It is observed that the registration of births and deaths is both qualitatively and quantitatively defective in several parts of the country. In this State also, though the practice of birth and death registration is in force since 1865, there has been a deterioration in the registration work. At present, intensive vital statistics work is being done to improve the vital events registration system. In order to improve the accuracy of vital statistics a four-point scheme for the improvement and strengthening of the machinery for the registration of vital statistics has been introduced in the State very recently. These are essentially sponsored schemes with 75 per cent Central assistance. Under the aid from the Ford Foundation, the Government of India have supplied free of cost machinery necessary for the machanical compilation of vital statistics.

India is at present committed to an intensive long range Family Planning Programme. It is essential to study the impact of this programme on Birth rate. This will be possible only if the Birth registration obtains the desired level of efficiency. Suppose a Family Planning Programme is in force in a village, we must find the correct number of births before the introduction of the programme and the number of births afterwards to assess the impact of the programme. Recently a decrease was noticed in the recorded birth rate. One of the reasons for the decrease is incomplete registration. During 1964 unregistered births were detected merely



Sri P. Kakkan, Minister for Home who presided over the Social Welfare Day celebrations, organised by the Madras State Branch of the Indian Conference of Social Work is going round the exhibition conducted by the families of Police personnel on the occasion.

by visiting at random a few villages. A total of 31,098 unregistered births were detected in the whole State during 1964 representing 3·5 per cent of the total births registered. Thus, intensive detection work if taken up, will render possible an improvement in the recorded Birth rate. The Government of India are now contemplating the enactment of a Central law on vital statistics.

Present condition

It is commonly found in the rural areas that several delivery cases conducted by midwives were not referred by them to the concerned Birth and Death Registrar. The same occurs with some hospitals and private nursing homes as well. Such defects are being immediatly rectified by communicating the relevant rules regarding the reporting procedures to the concerned officials. In the interest of efficiency of registration, the Government have directed that Tahsildars should sanction prosecution of persons who fail to register a birth or death. The Government have have also ordered that every Panchayat should hold a monthly meeting and the President should read out the entries relating to vital events for the previous month. This would enable the Panchayatdars to find out whether there is any omission. All the Panchayatdars are instructed to give wide publicity regarding birth and death registration and the time schedule fixed for the registration of vital events for different regions which are stated below. The importance of issuing a birth or death certificate should be given more legal value and for all purposes of proving age, place of birth, parentage, etc.

A sample registration scheme has been launched in the State as a pilot study to assess as far as possible the correct birth and death rates and also to study the deficiency in the registration system. Part-time Registrars are employed in the sample registration areas for the recording of births and deaths of resident population. The work of these registrars are closely supervised, and the registrars are asked to submit fortnightly returns. Besides the regular house to house survey of population, survey of births and deaths for every half year is also conducted. The watching of this survey and the recorded data helps to determine the quantitative

and qualitative deficiency in registration. It is hoped that this scheme would help up to estimate the correct Birth and Death rates of the State.

It is also decided to have a model registration scheme at the primary health centre level. The headquarter villages of the primary health centres and the sub-centres are to be covered under the scheme. The reason for selection of these villages is that there will be a resident member of the health centre staff available and he will be regularly and frequently visiting them. The field agent for the scheme is the sanitary inspector, public health nurse, midwife or social worker. It is preferable if the local resident midwife is appointed as field agent since he will be in touch with most of the events occurring inside the village and publicity would find little difficulty in collecting information on birth. It is optional to introduce the International classification of cause of death in respect of deaths occurring inside the village where the headquarter of the primary health centre is located. The Medical Officer should find little difficulty in certifying cause of deaths since a large number of the deceased persons would have been treated by him before death.

As per section 65 (K) of the Madras Panchayats Act, 1958, correct maintenance of vital statistics is the responsibility of the panchayat union. A vital statistics posting register has been prescribed and all the Health Inspectors of the Panchayat Unions have been directed to record the particulars of Birth and Death for all the panchayats every month. They have been instructed to spend one day in a week for the detection of unregistered vital events.

People's responsibility

It is expected that the present methods of improvement of the registration system will enable the State to have correct data regarding population and vital rates. National planning, family planning, all public health programmes and the protection of the rights of an individual require the development of Vital Statistics system.

People therefore, have a special responsibility to report immediately every birth and death in the interest of their own progress towards a better life. Moreover, the registration of vital events is having its own legal value, as stated already, and will help them in future. Hence people are requested to see that every birth and death is reported to the local Registrar of Births and Deaths immediately. Failure to do so is liable for prosecution. Every birth, still birth or death should be registered in accordance with the rules for registration of births and deaths. In non-municipal areas the time limit for reporting birth is fourteen days and for death four days. In municipal areas and in the City of Madras, the time limit for reporting births and deaths is seven days and 36 hours respectively. The duty of reporting births rests on the father or mother and the duty of reporting deaths rests on the nearest adult male relative.

DEVELOPMENT OF MINOR PORTS

SRI S. PANCHANATHAN, B.E. (C), B.C. (H), M.S. (Columbia), M.I.E. (India),
Superintending Engineer, P.W.D., Marine Works Circle, Chepauk, Madras.

Madras is one of the States in India that has a long coast line. Its sea boundry is about 880 kilo meters in length. Development of ports to facilitate communication and trade, and for increasing off-shore fishing, protection of land and buildings from sea erosion are problems that need to be tackled systematically. It is with the objective of developing the minor ports and to prevent damage from sea erosion that the Marine Works Circle was formed and is functioning from 1962.

The minor ports of the State are Cuddalore, Nagapattinam, Porto Novo, Tondi, Pamban, Kulasekarapattinam, Tuticorin, Kalakarai and Colachel.

Minor Ports

Preliminary investigations were carried out during 1962–63 in respect of 29 ports and the report was forwarded to the State Port Officer for suggesting the ports to be developed from the point of view of trade. It was proposed to carry out development works at Ennore, Veppalodai, Punnakayal, Manapad, Kulasekarapattinam, Colachel, Tuticorin and Cuddalore during the Third and Fourth Plan periods.

Cuddalore Port.—The port is situated on the East Coast of India and is located on the right bank of Uppanar backwaters, which runs parallel to the coast connecting the rivers Paravanar and Gadilam.

The mouth of the river Paravanar-Uppanar which is also the entrance to the port, shifts towards north by about 350 feet, per year on an average. The depth of water over the mouth also deteriorates to the extent of about 2 feet during certain months and this interferes with the traffic of boats.

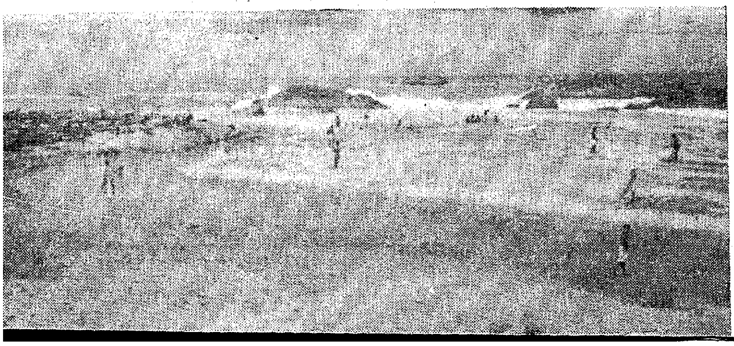
To arrest the shift of the mouth and to provide adequate depth of water below L.W.O.S.T. at the entrance to the port, the Cuddalore Fort Development Scheme was taken up. The scheme consists mainly of:

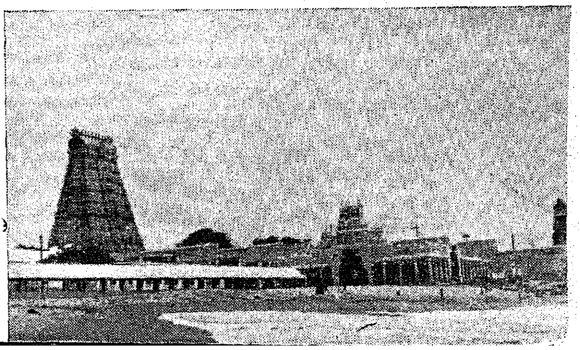
(*a*) river training works; and
(*b*) construction of breakwaters.

The Cuddalore Port is utilised for the export of high grade iron ore and coal. It is expected that an annual traffic of roughly about 6·5 lakhs tonnes will be developed at Cuddalore in the next 10 years. The existing traffic is of the order of 5 lakhs tonnes. The construction of river training works are in progress and the design of breakwaters is being finalised.

Nagapattinam Port:—The port is located at the mouth of the Kaduvayar river roughly 150 miles south of

***Left*:** **A view of Colachel bay.** ***Right*:** **Sea erosion near Tiruchendur Sri Subramanyaswami Temple.**





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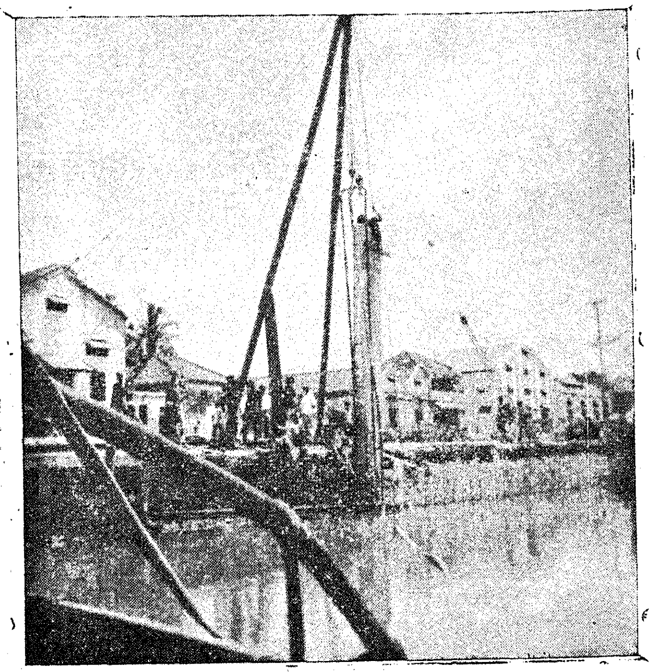


Reconstruction of the entire South Wharf at Cuddalore Port.

Madras. It is the chief port for Thanjavur district. General Development of the Nagapattinam Port has been taken up on hand and the following works have been done so far by the Marine Work Circle.

The work consists of extending the existing wharf of 380 feet by driving reinforced concrete sheet piles of 15″ × 10″ to a depth of 26 feet with the aid of water jets, on the bank of the Kaduvayar river. To ensure Mono-lithic action on top of sheet piles coping beam is provided with necessary anchoring arrangements by driving anchor piles at intervals of 15 feet and inter-connected by tie beams and anchor beams. Necessary fendering arrangements have also been made in front of the wharf to absorb shock due to impact of boats. The cost of this extension work is 2·7 lakhs.

The eastern wall facing the sea was constructed at a cost of Rs. 74,000 to prevent the sea waves entering timber wharf and to prevent scouring of the Beach. Improvements to the low lying area of the Timber Wharf was made at a cost of Rs. 1,35,000. The area has been filled with sea sand and hard standing of 6″ soling and 4″ granite jelly have been provided with 2″ gravel topping. By this improvement, a cleaner stacking area has been made available.

About 25,000 passengers pass through the port annually. It is found that the covered space in the port for the examination of passengers and goods is not sufficient. A passenger terminal station in the port area, is therefore, under construction at a cost of Rs. 8 lakhs.

Tuticorin.—The construction of a slip way and extension of south wharf, estimated to cost Rs. 1·95 lakhs and Rs. 2·62 lakhs respectively are under execution at the Tuticorin Port.

Kilakarai.—Construction of an R.C.C. jetty with wharf wall at the port of Kilakarai has been completed at a cost of Rs. 1·54 lakhs. For the further development of Tuticorin Port and for the expansion of Ennore, Colachel, Vepalodai and other ports investigation works are in progress.

Fisheries development

Due to the increaed demand for sea fish and the need for deep sea fishing, the Government proposed various schemes such as the construction of mechanised boats, Boat Building Yards, Establishment of Ice Plants and Cold Storage, Fishing Harbours, etc. As the nature of these works is closely related to Minor Port Works and as the Fishing Harbours are normally established in juxtaposition with the Minor Ports, the fisheries works along the coast were also entrusted to the Marine Works Circle.

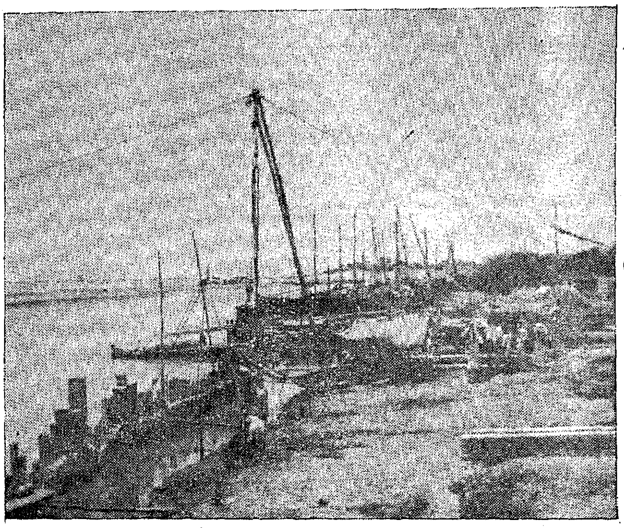
Fishing Harbour at Nagapattinam.—There is a boat building yard at Nagapattinam with an output of 50 boats per year and a fisheries training centre for training young fishermen in mechanised fishing. A Cold Storage Room for keeping the fish catch is also available. For berthing of fishing crafts and to facilitate transport of catch from crafts to shore, a wharf 450 feet long with other amenities has been constructed by Marine Works Division at cost of about Rs. 5·9 lakhs.

Indo-Norwegian Project at Mandapam.—According to the agreement entered into between the U.N.O., the Government of Norway and the Govenment of India in 1961, the activities of the Indo-Norwegian Project have been extended to Madras State also. The programme of activities of the Indo-Norwegian Project at

Traffic at Major of Ports of India

The traffic handled at the major ports during 1964–65 was as follows :—

	(TONNES IN MILLIONS).
Calcutta	11·1
Bombay	17·3
Madras	4·4
Cochin	2·8
Visakhapatnam	3·9
Kandla	2·3
Mormugao	6·6
Total ..	48·4



Nagapattinam Port South Wharf extension.

Mandapam include construction of Boat Building Yard, Ice Plant-*cum*-Storage, Jetty, Training Centre, etc.

Construction of Fishing Harbours at Colachel, Tuticorin and Cuddalore and Jetty on the Palk Bay side at Mandapam, R.C.C. Tee Headed Jetty at Rameswaram, class rooms, Engine room, Fisheries Training Centre and Administrative Block at Cuddalore and Slipway at Nagapattinam are also under consideration.

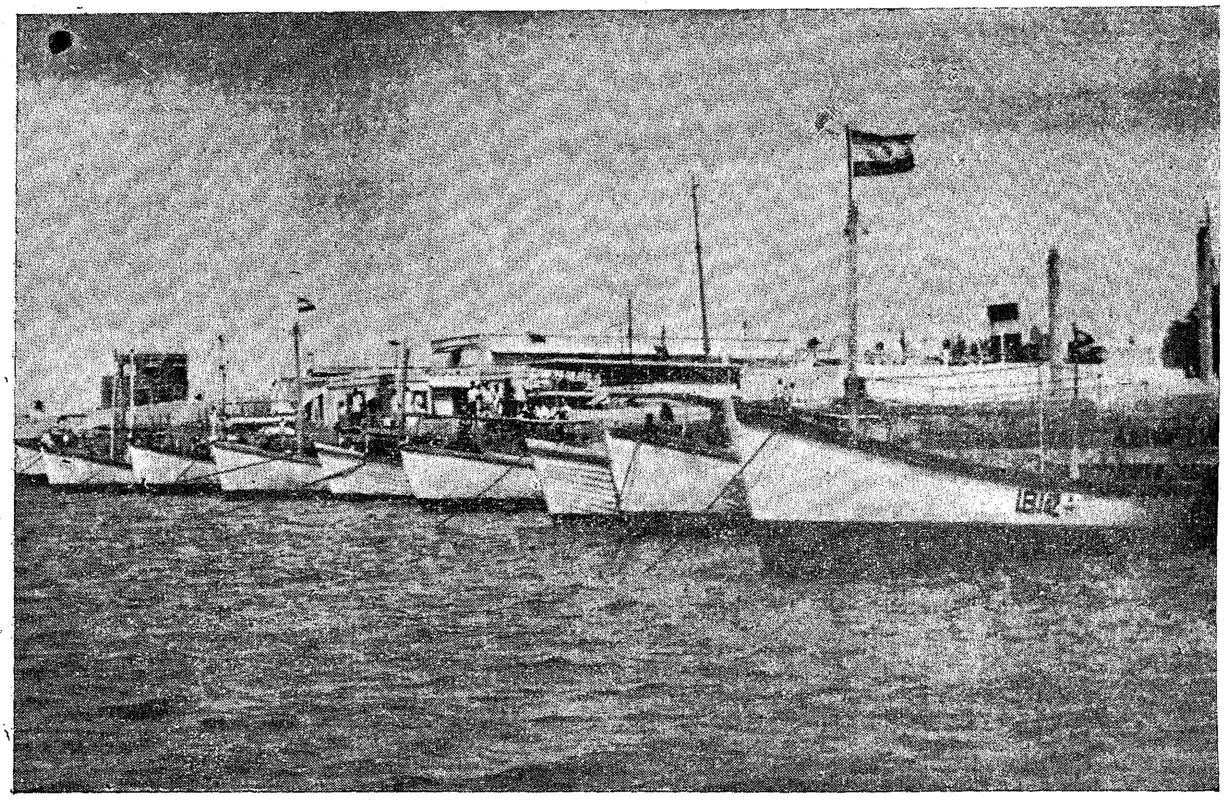
Sea erosion

A large number of villages are situated along the sea coast in the State and they are often subjected to the vagaries of the rising tides and waves. The places where the coastal strips are progressively eroded by the sea are Midalam, Muttom and Pallam in Kanyakumari district; Manapad and Tiruchendur in Tirunelveli district; Ammapattinam in Thanjavur district; Royapuram in Madras and Thiruvottiyur in Chingleput district.

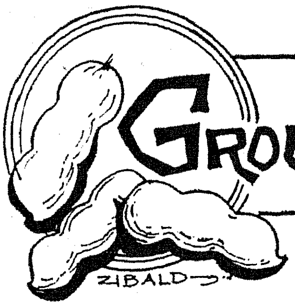
Under the Fourth Five-Year Plan, it is proposed to undertake protective measures for arresting sea erosion. For this purpose a provision of Rs. 20 lakhs has been suggested. Among the 12 centres where such measures are considered essential, the works at Overi and Manapad in Tirunelveli district will be given high priority and the works at Royapuram will also receive urgent attention.

Inland water-ways.—In order to improve the communication, not only the ports, but also, the inland waterways have to be developed. The age old Vedaranyam Canal plays an important role as a navigation canal in Thanjavur district. The scheme has been investigated in detail and proposals to develop the canal for six feet draught at a cost of Rs. 2·12 crores are being considered for inclusion in the Fourth Plan.

The tentative outlay in the Fourth Five-Year Plan for the heads of development associated with the Marine Works Circle are as follows: Minor Ports Rs. 608·00 lakhs, Fisheries Rs. 641·00 lakhs and Sea erosion Rs. 20·00 lakhs.



Boat Building Yard at Mandapam under Indo-Norwegian Project.



Groundnut Crop Survey

A scheme for conducting sample survey for estimating groundnut yield was initiated in Madras State in 1959–60. The project was taken up by the Department of Statistics as part of the scheme for crop estimation survey on non-food crops with financial assistance from the Indian Central Cotton Committee, Indian Central Oil Seeds Committee and the Government of India. The direct responsibility of planning the survey, organising the field work and tabulation and processing the data collected vested with the Department of Statistics, Government of Madras. The Directorate of National Sample Survey, Government of India, offered technical guidance in the planning and organisation of the projects. Some of the salient features of the crop estimation surveys on groundnut crop carried out during 1962–63 and 1963–64 are discussed here.

Object

The main object of the survey was to estimate the average yield per acre and the total outturn of groundnut for the individual districts covered by the survey for the State as a whole. The survey also provided additional information such as seed rate varieties of groundnut grown, manure applied, cultivation practices adopted, etc.

The total acerage under groundnut crop in the State according to the final forecast for 1962–63 was 2,077,500 acres (840,735 hectares) and for 1963–64 was 2,281,600 (923,300 hectares). The survey covered both irrigated and unirrigated varieties of groundnut crop. During 1962–63, it was carried out in 10 districts accounting for about 2,075,500 acres (839,900 hectares) or 99 per cent of the total area under the crop. In 1963–64 also it was carried out in 10 districts accounting for about 2,278,000 acres (921,900 hectares) or 99 per cent. As in previous surveys a total number of 325 villages was fixed at the State level for the conduct of experiments in each year 1962–63 and 1963–64. The number of villages for experiments on the irrigated and unirrigated varieties was decided on the basis of area under each as 50 and 265 respectively. The further allocation of the sample villages selected for the survey among the different districts and taluks was done in proportion to the acreage under the respective variety in the districts and in taluks within the district.

Crop Yield

A total of 650 experiments were planned for each year. Out of the total experiments of 650 planned 410 experiments representing 63 per cent were successfully conducted during the year 1962–63, while 560 experiments representing 86 per cent were successfully conducted during the year 1963–64. The State level estimates of average yield of groundnut for the years 1962–63 and 1963–64 as compared with the corresponding estimates obtained during 1961–62 are tabled below :—

Year	*Estimate of average yield of groundnut in lb. per acre*		
	Irrigated	*Unirrigated*	*Irrigated and unirrigated combined*
(1)	(2)	(3)	(4)
1961–62 ..	1,155	868	901
1962–63 ..	1,242	764	818
1963–64 ..	1,039	820	847

The period of sowings and harvests of groundnut crop relating to 1962–63 and 1963–64 are given below :—

District	*Period of sowing*	*Period of harvests*
(1)	(2)	(3)
	Irrigated Groundnut Crop.	
1 Chingleput ..	January and February.	April and May.
2 South Arcot ..	February and March.	May and June.
3 North Arcot ..	February ..	May.
4 Salem	July	September.
5 Coimbatore ..	April to July ..	September, October and November.
6 Tiruchirappalli..	January and February.	May.

District (1)	Period of sowing (2)	Period of harvests (3)
7 Madurai..	February and March.	June.
8 Ramanathapuram	December and January.	April and May.

Unirrigated Groundnut Crop

District (1)	Period of sowing (2)	Period of harvests (3)
1 Chingleput ..	June, July and August.	October, November and December.
2 South Arcot ..	July to September.	October to January.
3 North Arcot ..	July to September.	October to December.
4 Salem.. ..	July to September.	September to December.
5 Coimbatore ..	April to September.	August to January.
6 Tiruchirappalli ..	July to September.	November, December and January.
7 Thanjavur ..	July, August and September.	November to January.
8 Madurai.. ..	July to September.	November to January.
9 Ramanathapuram	August and September.	December and January.

It may be seen that in general, the sowings of irrigated groundnut crop took place in the period from January to March and the harvests were carried out in the months of April, May and June. The peak period of sowings and harvests for the unirrigated groundnut crop was in the months of July and December respectively.

Mixed Crop

Two different methods of sowing, viz., sowing in rows and sowing by broadcast were found to have been practiced in the State. The crop was mostly sown in rows in all districts of the State except in Chingleput, Coimbatore and Madurai districts where it was sown by broadcast (i.e., scattering of seeds).

It was observed that for the year 1962–63 in 274 plots forming 67 per cent of the total number of 410 plots, the groundnut crop was grown as a pure crop while it was raised as a mixture crop in the remaining 136 or 33 per cent of the experimental plots. For the year 1963–64 in 489 out of 560 plots, constituting 87 per cent the groundnut crop was grown as a pure crop while it was raised as a mixture crop in the remaining 71 plots or 13 per cent of the experimental plots.

Chief Minister who distributed prizes to the winners in the vegetable development competition at YMCA is witnessing the vegetables grown under the Kitchen Garden scheme.

The crops commonly grown in mixture with groundnut in the different districts were observed to be as follows:—

District (1)	Crops grown in mixture with groundnut crop (2)
1 South Arcot ..	Redgram, Cholam, Cumbu and Gingelly.
2 North Arcot ..	Redgram, Greengram, Cholam and Castor.
3 Salem	Redgram, Castor, Cholam, Cumbu and Cotton.
4 Coimbatore ..	Cholam, Ragi, Greengram, Redgram and Pulses.
5 Tiruchirappalli..	Redgram, Mochai, Bengalgram, Maize and Cumbu.
6 Thanjavur ..	Redgram.
7 Madurai.. ..	Redgram, Cholam, Cumbu and Lab-Lab.
8 Ramanathapuram.	Redgram and Cowpea.

Redgram was the common crop grown in mixture with groundnut in the different districts.

Estimates of average yield of groundnut for pure-sown and mixed-sown categories were also worked out. At the State level, the net average yield for 1962–63 worked out to 848 lb. per acre based on 274 experiment in the case of pure crop and to 823 lb. per acre based on 136 experiments in the case of mixture crop.

Similarly for the year 1963–64 the State level net average yield worked out to 830 lb. per acre based on 489 experiments in case of pure crop and 1,020 lb. per acre based on 71 experiments in the case of mixture crop.

The average seed-rate adopted by the ryots in different districts was observed to be as follows :—

District		Average seed-rate in lb./acre 1962–63.	1963–64.
1	Chingleput	88	74
2	South Arcot	87	72
3	North Arcot ..	88	74
4	Salem	88	81
5	Coimbatore	92	92
6	Tiruchirappalli ..	84	84
7	Thanjavur	88	92
8	Madurai	89	95
9	Ramanathapuram ..	79	75
10	Tirunelveli	82	80

It may be seen that the average seed-rate per acre ranged from 79 lb. in Ramanathapuram district to 92 lb. in Coimbatore district during 1962–63 and from 72 lb. in South Arcot district to 95 lb. in Madurai district during 1963–64.

Types of manure

It was observed that five varieties of groundnut were mainly grown in the different districts of the State during the years 1962-63 and 1963-64, as in the previous years. These were (i) Local spreading type, (ii) T.M.V. 1, (iii) T.M.V. 2, (iv) T.M.V. 3 and (v) Bunch variety. Since the number of experiments that got conducted in each of these varieties was very small except for the local spreading type, variety-wise estimates of yield have not been prepared.

The survey also provided for the collection of data regarding the types of manure and the quantity of each applied per acre by the ryots. The types of manures applied in the fields were noticed to be (1) Farm Yard Manure, (2) Compost and (3) Tank silt. Out of the 410 plots selected for experimentation during the year 1962–63, one or more types of manures had been applied in 264 plots representing 64·4 per cent. During 1963–64, 396 out of 560 plots constituting 71 per cent were treated with one or more types of manures. The number of fields which received the different kinds of manures at the State level were as shown below :—

Type of manure	Number of fields receiving manures 1962–63.	1963–64.
Farm Yard Manure ..	252	384
Compost	10	4
Tank Silt	2	..
Amonium Sulphate ..	2	2
Sheep-penning	..	6

Farm Yard Manure was commonly used in all the districts covered by the survey. Compost was in usage in parts of Coimbatore, Tiruchirappalli, Thanjavur and Madurai districts.

Yield

The yield rate during the year 1962–63 in fields receiving manure worked out to 821 lb. per acre as against 789 lb. per acre in respect of unmanured fields. For the year 1963–64 the yield rate worked out to 839 lb. per acre in respect of manured fields and 792 lb. per acre in respect of unmanured fields.

The survey on irrigated crop was planned in 8 districts of the State during the year 1962–63 but the experiments were actually got conducted only in 7 districts. The survey was confined only to 7 districts of the State during 1963–64. In all these districts, the main source of the irrigation was found to be wells. Canal irrigation was common in the districts of Coimbatore and Tiruchirappalli while in South Arcot, North Arcot and Madurai tank irrigation was in vogue.

Data on the weight of the experimental produce in terms of groundnut pods and kernels were also collected in the course of crop estimation survey on groundnut crop. From these, an overall estimate of the ratio of groundnut kernels to unshelled dry pods was determined. The ratio of groundnut pods to kernels in respect of the combined crop for the State as a whole, for the year 1962–63 is 69·5 per cent and for the year 1963–64 is 63 per cent as against official conversion factor, viz., 75 per cent.

Crop estimation survey on groundnut crop also provided information for working out results of driage. Driage experiments were not conducted separately, these particulars are gathered in the course of crop estimation survey on groundnut. These driage ratios computed are not adopted for estimating the yield, since only the weight of dry and clean produce (unshelled nuts) is considered for analysis. The driage ratio for the State as a whole was 75·5 per cent for the year 1962–63 and 67 per cent for the year 1963–64.

Madras Leads in HYBRID CHOLAM

Sri K. VENKATARAMAN AND Sri A. SHANMUGASUNDARAM
[Millet Breeding Station, Coimbatore.]

Madras State already stands foremost in the per-acre production of cholam in this country. A new achievement in millet-improvement, in which the State Department of Agriculture has very actively participated, is going to be very helpful to the State in maintaining its lead in the production of cholam, which is a very important foodgrain of Madras State.

The achievement is the recent release of the improved cholam variety CSH 1, to the farmers. This new variety is a hybrid, the first of its kind to be released officially in this country. With the advent of this variety, which markedly differs from others, both in the technique of production and in the scientific basis of its productive potentiality, a new chapter has been opened in Millet Research in this State.

Remarkable feature

The remarkable new variety, produced as high a grain yield as 7,410 kilograms per hectare (about 6,600 pounds per acre), in trials conducted on a farmer's field in Tiruchirappalli district. In several other trials also the hybrid variety outstripped the best local varieties consistently. A pooled evaluation of all the trials brought out the spectacular fact that the hybrid had yielded 4,885 kilograms of grain per hectare on an average and had beaten Co. 18—another reputed variety —by a convincing margin of 61 per cent.

This new variety has been christened CSH. 1, to signify "Co-ordinated sorghum Hybrid No. 1". This is because it is actually the product of the joint efforts of the Indian Council of Agriculture Research, the Rockefeller Foundation and State Department of Agriculture.

Following extensive trials during 1963 and 1964, the hybrid has been very well received by the farmers in several districts of the State. Besides the yield potential, it has several preferred features, such as responsiveness to manuring, a leafy-juicy stalk (which enhances fodder value), attractive cream-pearly coloured grains and a short maturity period of only three months. It has also a stocky build which enables it to stand against strong winds. This would be found particularly useful in tracts where fast winds often damage the standing crops of cholam.

Appropriate season

This hybrid is particularly recommended for being grown during the summer months, when cholam is grown with irrigation, extensively, in almost all the districts of the State. During the current and following plan periods, a very wide coverage of about a lakh of hectares with the hybrid is being envisaged and seed production programmes are actively being processed towards this end.

On the basis of present experience, the new hybrid has a potential coverage of about one lakh hectares. Evaluating its capacity for increased grain-production at even *half the actual* increases obtained in the exploratory trials, full coverage with the hybrid is likely to result in an additional foodgrain production of 90,000 tonnes annually, the money-value of which would be approximately 45 million rupees.

On all the foregoing considerations, it is highly probable that within the next decade, a new look would have developed in cholam-growing tracts of Madras, due to the advent of the hybrid cholam.

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Export of Electrical and Allied Equipments

It was in the month of January 1965, when a group of industrialists had a discussion with the Director of Industries and Commerce, Madras, wherein the prospects for the Electrical Equipment industries in the Southern Region came up for review and then the idea was mooted that in the interests of their expansion and continued growth and in the national interest, an attempt should be made to export electrical and allied equipments.

The fact that Madras State was leading the country in rural electrification, and was ranking high in the matter of utilisation of electrical energy and the technical skill of the industry in Madras is of a very high order, are factors that influenced the thinking for export of engineering skill and equipment abroad. This idea was working in the minds of people and this got a new life in September, 1965, when in a meeting of the Industrialists, the Government of Madras, conveyed through the Director of Industries, their interest and active support for the objective. The Seminar on electrical industries held in February, 1966, further gave an idea of the potentialities of the electrical industries in the state.

It was considered that the closest collaboration of all the manufacturers of electrical equipment on the one hand and the State Government patronage on the other would be particularly valuable as such a collective organisation would be in a position to quote for and execute package contracts abroad, involving export of equipment and services i.e., 'Turn-key' jobs. This type of sales effort and organisation on a 'consortium' basis is found to be most welcome in many of the under-developed countries where local know-how for composite engineering construction is non-existent and contracts are awarded as packages.

In the meeting in September, 1965, the first practical step was taken and a Committee was formed with Sri. S. Narayanaswamy as Chairman, Messrs. A. R. Narayana Rao, R. W. England, S.K. Mallick, N.S. Sethuraman as Members and Sri E.N. Narayanaswami as Convenor to work out the details for the formation of an export house. The Committee examined various possibilities and after a lot of consultations, a Memorandum and Article of Association was prepared and adopted.

Throughout the period of formation the sustained interest and efforts taken by the Director of Industries, Madras, was an important driving force in the successful culmination of the efforts in launching the Association. Almost all the electrical and allied Industries in the State were contracted by the sponsors and a lot of spade work was done. So far 18 industries have enrolled themselves as members both subscribing and Associate.

The Association has been formed with the main object of pooling the resources of Electrical Industries in Madras State or elsewhere and prospect for the promotion of export of electrical and allied materials and to undertake jobs for the manufacture, supply, erection, construction, operation and maintenance on a turn-key basis. As a first step the Association is sending a prospecting Team to various countries of Africa and Middle East. The Team will visit first the LEIPZIG FAIR, which is the meeting ground for all the industrialists and from there will proceed to African and Middle East Countries, i.e. (1) Libya, (2) Kenya, (3) Tanzania, (4) Ethiopia, (5) Sudan, (6) United Arab Republic, (7) Iran, (8) Iraq, (9) Lebon and (10) Kuwait.

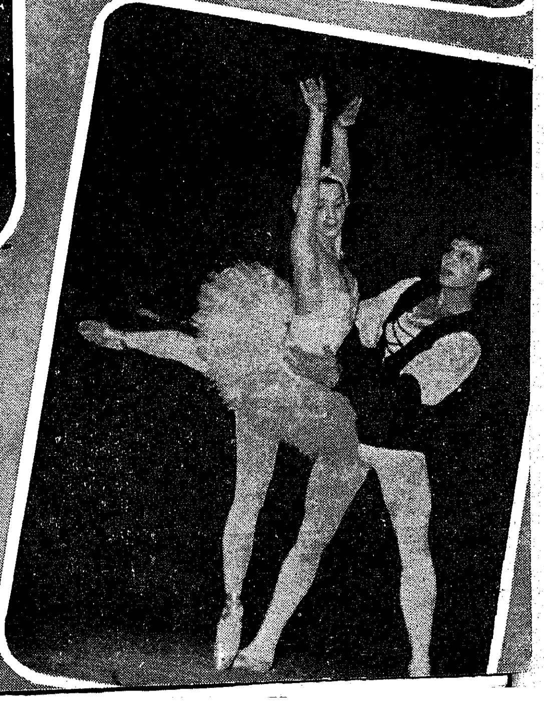
In these countries, the Prospecting Team would establish contacts, collect all details and data and discuss the basis of submitting tenders and of undertaking work there in such diverse fields as : (*a*) High voltage transmission lines and distribution schemes ; (*b*) High voltage substations and switching stations ; (*c*) Outdoor yards of power stations ; (*d*) City distribution and Pumping schemes ; (*e*) Flood lighting and street lighting schemes ; (*f*) Large Hotel and colony electrification and electrification of Textile, Cement, Paper Mills and other industries.

The visit of the Prospecting Team can be confidently be expected to lead to the Association entering the export field in a big way. The Association will further its activities in accordance with its objectives, meet visiting dignitaries, organise trade fairs and exhibitions, orgnise interplant visits, technical exchanges and take all steps for creating a sizeable export market for electrical industries.

The Soviet Ballet Troupe which toured India under the cultural exchange programme of the Government of India staged a variety of Russian dances at Madras. In the page are reproduced some of the dances from the performances of the Troupe.

SOVIET BALLET TROUPE *in* MADRAS

Please See facing page



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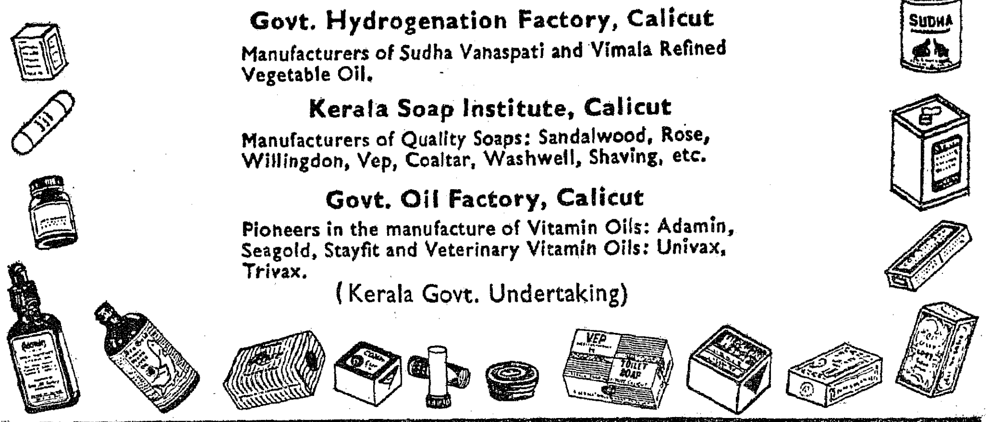

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12 MAY 1966
MADRAS

Madras Information

MAY '66 20P

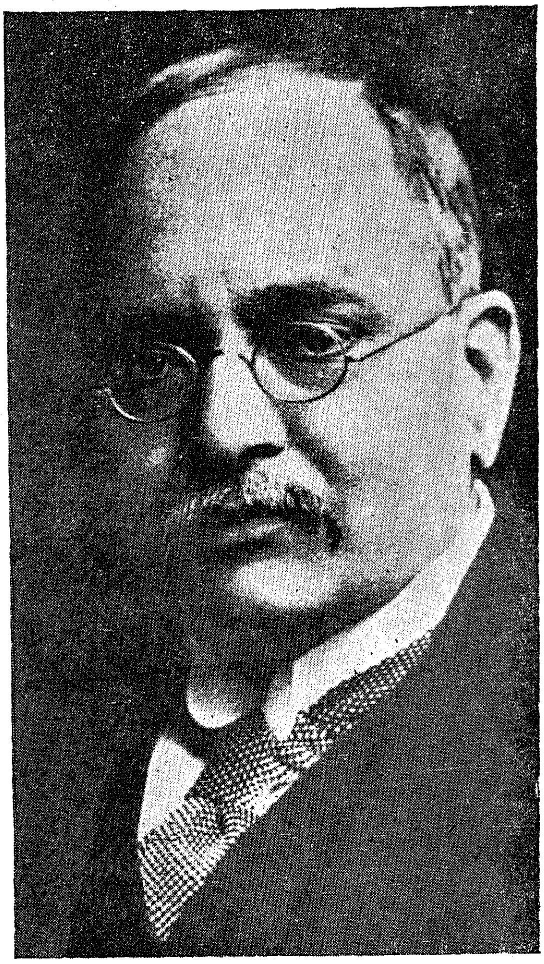
GOKHALE BIRTH CENTENARY NUMBER

15

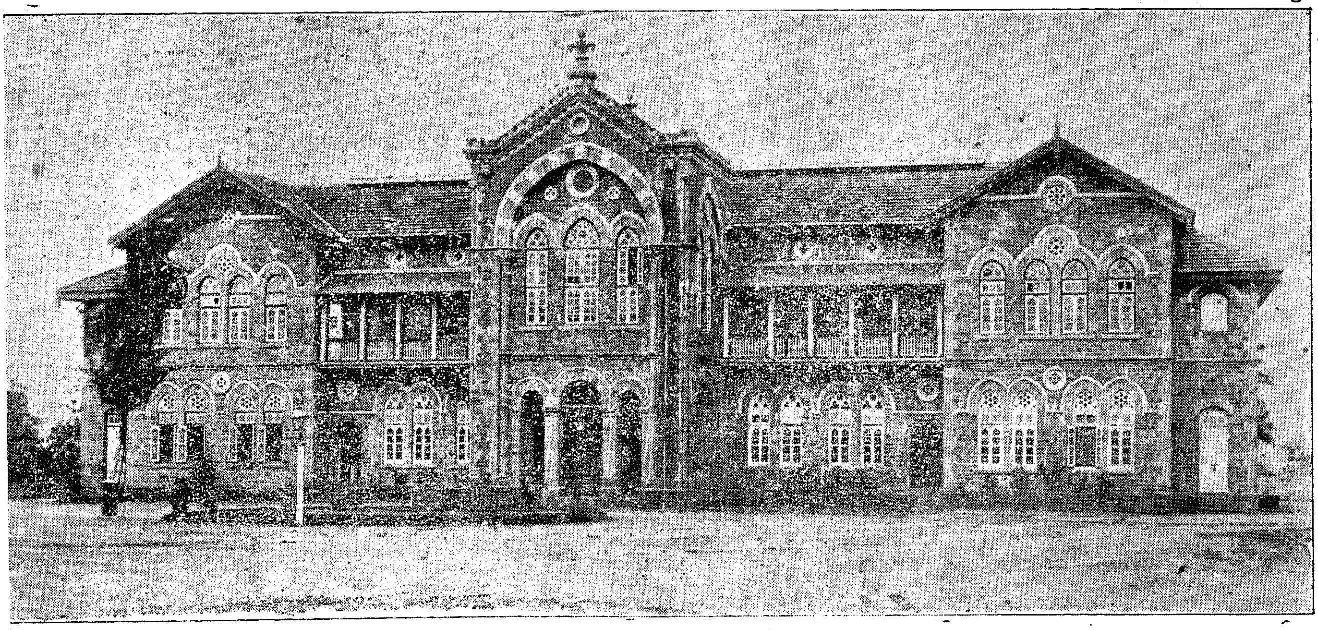
GOKHALE

A man of Marvellous Career

A graduate at eighteen, Professor at twenty, Editor of a journal like the Quarterly of the Poona Sarvajanic Sabha at twenty-one, Secretary of the Provincial Conference at twenty-five, Secretary of the National Congress at twenty-nine, leading witness before a most important Royal Commission at thirty-one, Provincial Legislator at thirty-four, Imperial Legislator at thirty-six, President of the National Congress at thirty-nine, National Envoy to the Imperial Government and founder of institutions at forty—this is the marvellous and brilliant career of Gokhale.



A view of the Fergusson College, Poona, where Gokhale worked for 18 years and helped to build it. It was after retirement from this College he entered politics.



problems, sufferings and aspirations of the masses. The educated class has therefore to perform a creative function and to arouse mass consciousness.

December, 1965.

National strength and solidarity

How strange that there should be voices amongst us advocating expediency instead of principle, lauding alignment instead of free judgment. No, our strength lies in our character, in our determination, in our development. It is because our house is being built not on the shifting sands of expediency but on the firm concrete of solidarity and progress that we have emerged from this crisis stronger and more mature. Let us press this advantage and surge forward to our goal.

Our historical and pre-independence connections apart, in these 18 years Kashmir has become inextricably woven into the fabric of our national life. It has formed part of all our plans and ventures. No section of it could now be separated without seriously weakening the whole. Those who think that the conflict over Kashmir is one of territory are mistaken. It is one of principle and ideology. The principle is one on which our nation is founded—secularism.

November, 1965.

LAL BAHADUR'S INTEGRITY

When Lal Bahadur was in Naini jail, one of his daughters fell seriously ill. But Lal Bahadur would not seek parole because the jail authorities expected him to undertake in writing that he would not take part in the Congress movement while temporarily out. It was never his intention to do anything of the kind, but it went against his grain and sense of honour to give such an undertaking.

Thereupon, the Jailor who knew Lal Bahadur's high integrity, let him go on fifteen day's parole without laying down any written conditions. But alas, the day Lal Bahadur reached home, his daughter died. Lal Bahadur performed the last rites and immediately went back to jail, without utilising the 15 day's parole.

A year later, Lal Bahadur's four-year old son was down with typhoid. He was running a temperature of as much as 104 degrees. Lal Bahadur availed of a week's parole, ofcourse without any written undertaking.

When the week of parole came to an end, the child's condition, if anything, got worse. The jail authorities now insisted upon his giving a written undertaking to eschew political activity during the period of extended parole. Lal Bahadur point-blank refused to give any such undertaking.

As the time for the father's return to jail drew near, the child's fever touched 105—106 degrees. The father stood by the son's bed for long hours, as if rooted to the ground, with his big expressive eyes pinned on the child.

Through feverswollen lips the child whispered : "Babuji, please don't go". Tears rolled down the father's cheeks. Then, he suddenly shook his head, as if waking from a dream, and gritted his teeth, namaskared every one and briskly walked out and marched back to jail, without once looking behind.

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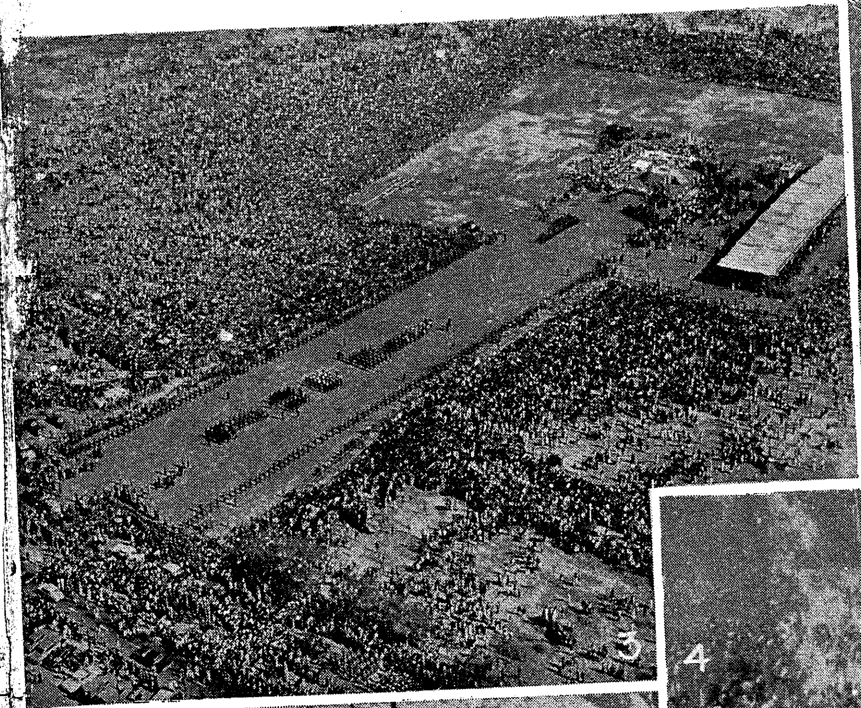
3. The subscribers of " Madras Information " are requested to QUOTE THEIR SUBSCRIPTION NUMBERS in all their letters and in the coupons of Money Orders addressed to the Director of Information and Publicity, Public (Information and Publicity) Department, Madras-9, and the Director of Stationery and Printing, Madras-1, to facilitate easy reference and for taking prompt action thereon.

All communications should be addressed to

THE DIRECTOR OF INFORMATION AND PUBLICITY
FORT ST. GEORGE, MADRAS-9.

LAST JOURNEY

(1) The body of Sri Lal Bahadur Shastri being borne by Pall bearers to the gun carriage after arrival at Palam Airport on January 11, 1966 (2) The President Dr. S. Radhakrishnan and the Prime Minister Sri Gulzarilal Nanda, are paying homage to Sri Lal Bahadur Shastri. (3) An aerial view of the arrival of the funeral procession of Sri Lal Bahadur Shastri to the cremation grounds near Shantivana, Delhi, on January 12, 1966. (4) Sri Lal Bahadur Shastri's eldest son Sri Hari Kishen is paying last homage at the pyre. (5) The urns containing the ashes of Sri Lal Bahadur Shastri were kept at 10, Janpath Road, New Delhi, for public view before Immersion.



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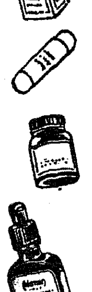

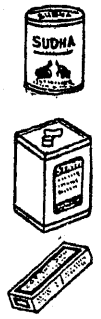

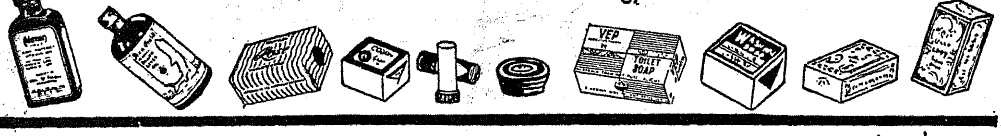

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